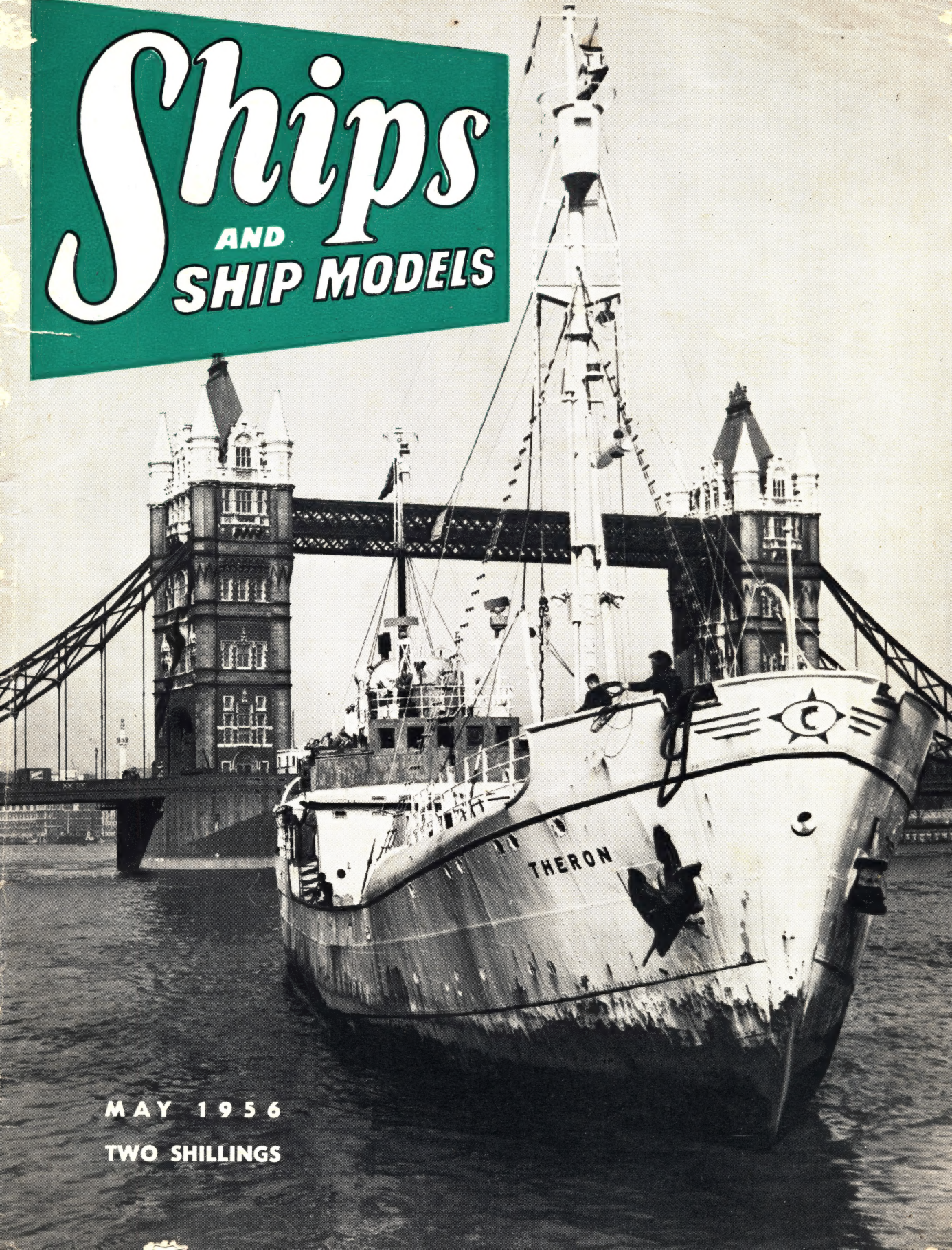


# ***Ships*** **AND SHIP MODELS**



**MAY 1956**

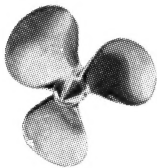
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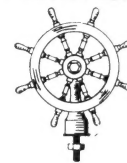
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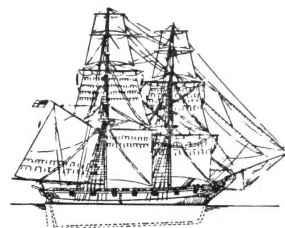


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# ***Ships*** **AND SHIP MODELS**

INCORPORATING MODEL SHIPS & POWER BOATS

Vol. IX. No. 100. MAY 1956

## **THE SHIP'S LOG**

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SHIPS AND SHIP MODELS is always on the lookout for first rate illustrated articles, and readers are invited to submit contributions. Constructional details of ship models of all types are required and articles relating to model yachts and yachting. Manuscripts should be sent to the Editor, with stamped envelope for return if unsuitable.

**A**LTHOUGH THERE IS reason to believe that the effects of television are not quite as comprehensive as they have been, the time spent viewing must still be considered the greatest enemy of ship modelling. It is not so much that modellers and would-be modellers spend every evening glued to a television set, but the fact remains that each hour spent viewing—whether it is one each day or one in a month—represents less time available for other more rewarding pursuits.

Perhaps the greatest problem is whether young men can be won away from push-button amusements and interested in using their hands and brains. We believe that they can and that they will be worthy successors to the craftsmen who have greatly added to the worth-while achievements in a world in which so much is transient.

We believe, too, that youngsters must be given every encouragement to use their hands: not only verbal encouragement but active and practical help. They need advice without interference, guidance without patronage, and finally they must be given responsibility. Young men must be drawn into the affairs of clubs and societies which are the cradle of ship modelling craftsmen; we are confident that if they are, then the future can look after itself and that little will be heard of the menace of television.

**I**MPORTANT DATES in the calendar for ship modellers are those of the MODEL ENGINEER Exhibition. It will be held at the New Horticultural Hall, Westminster between:

### **AUGUST 22—SEPTEMBER 1**

Entry forms will be available shortly and intending exhibitors should apply for them at once. Ship models occupy an important position in what is without doubt the leading exhibition of models in the world and there seems to be every prospect that this year's entry will be up to the usual high standards.

Sunday, September 2 is a date of great importance to the builders of power boats and racing hydroplanes. This is the year's biggest regatta and well over 100 entries are usual, more than half of them being prototype models from cabin cruisers to liners. Another important date is Sunday, June 17—the date of the rally of prototype sailing ships from spritsail barges to square riggers. See Jason's Notes, and Club News.

An omission in last month's issue. The drawing of the m.v. *Tern* was by courtesy of "The Shipbuilder", and we are glad to acknowledge its source.

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# WHERE SAIL SURVIVES



Writing from Ceylon  
**ALAN VILLIERS**  
sends us these vivid first-  
hand impressions of the  
sailing fleets of the East.

I AM SITTING IN an hotel overlooking Colombo's famous man made harbour which, one is pleased to see, is packed with ships—many of them British. On an average day there seem to be at least three Clans, three Brocklebanks, one Ellerman's, a P. & O. and a B.I. in port, the steamships coming and going in a constant stream.

The walk along the new breakwater wall, to the west of the port, is fascinating any day. Big Orient liners to Australia, giant P. & O.s as big as the biggest North Atlantic liners used to be not so many years ago, Bibby's bound for further East, Alfred Holt's shapely Blue Funnellers (still with their outsize blue and black-topped stacks though many are motor-ships today), Glen liners looking exactly like Holt ships except for the colour of their funnels, curious migrant carriers that look like converted cargo-ships, which are generally manned by Italians and frequently fly the Panamanian flag, are all to be seen here. Work to provide more berths alongside proceeds, and should be ready any day—as should the new quay built out by the passenger landing station.

## Thatched houses on after-decks

It is the so-called "country craft" which mainly interest me, the locally built sailing vessels. In Galle, in the south of Ceylon (where the Portuguese put up a big fort in the early years of the sixteenth century), I saw a dozen not long ago. A few were Indians which had brought tiles down from Mangalore and were landing them in the local sewn surf boats, and the rest were Maldivians—among them queer little vessels with thatched houses built up over their after-decks and a sort of primitive brigantine rig. They set a deep and narrow square sail on a high mainmast, and a small lateen on a low mizzen. I watched one go out. She looked altogether a primitive job to me, but the Master Attendant—a retired British naval officer—said that generally they arrived at their destinations! They were in fact the most primitive deepwater sailing ships I have ever seen.

From Ceylon to the Maldives is a deepsea voyage across 400-odd miles. It is not coasting. The spar on which the square sail was set looked as if it had been cut from a weak tree, and the mast itself didn't look much stronger. The little ship—I suppose she was about 40 ft. long—was jumping and rolling about even before she left the shelter of the harbour, and neither her stability nor her manner of construction impressed me much.

Of course, it was during the north-east monsoon, when usually the weather can be relied upon to stay pretty good. These small Maldivians carry on their own trade. They come to Galle about November or so, bringing the dried fish for which the Maldives are famous, coconuts to sell to the local coir and copra industries and some tortoise-shell or even a little ambergris—for a fair amount of this stuff washes up on the 2,000-odd islets and atolls of the Maldives, and it still has considerable commercial value. After they have disposed of their inward cargoes they buy their islands' needs for the south-west season, and off they go.

## Sterns copied from Portuguese

The Maldivians which come into Colombo are very different. These are mainly big baggalas, like big Arab or Indian dhows. A baggala—or buggalow—as I learned when I was sailing with the Arabs, is a lateen-rigged two-master with a stern like a galleon's, with five stern windows and quarter galleries, etc. (The Arabs told me the stern was copied from the old Portuguese ships which they considered superior to their own at the time of Alfonso d'Albuquerque; they have kept to the style ever since.) These baggalas generally belong to Indian merchants who operate at Male, in the Maldives, and make a living out of the dried fish. They are sturdy vessels of 100 to about 200 tons, and there used to be in addition a couple of 200-ton brigs in the trade. The best of these was the well-known *Attiyathur Rahman*, which belonged to the Sultan of the Maldives. (I am informed that she is now considered too old for the trade and is laid up at Male.) The only other Maldivian brig was



sent this year to Calcutta, with a cargo of a million coconuts. She featured in Lloyd's Shipping List for a while—when bad weather blew her off the Hooghli mouth and she was adrift for a couple of weeks. She arrived quite safely (after air search had reported her as missing) now she is on the way back to Male.

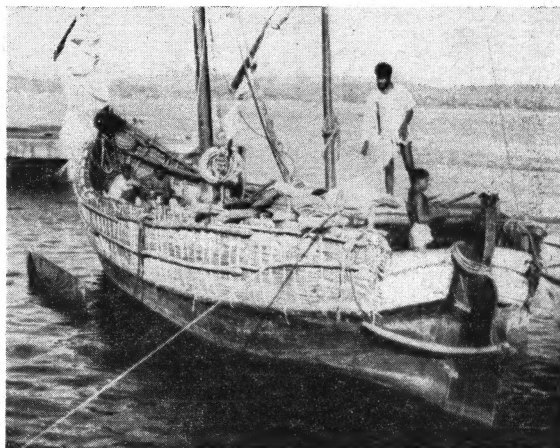
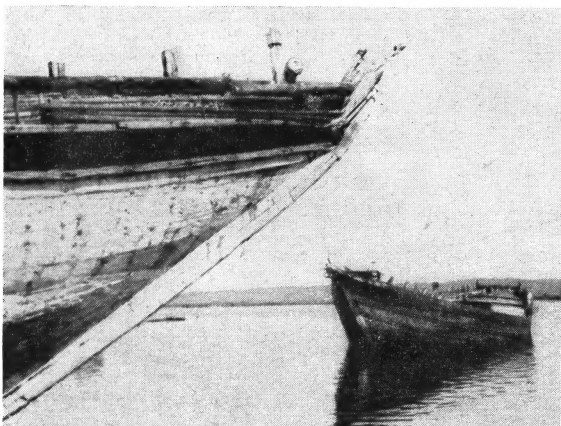
As yet I have not come across any brigs or barques, barquentines or brigantines. I am told that maybe I will find some up at Jaffna. Many Indian square-riggers have gone out of business in recent years, partly because of the development of an Indian merchant service of powered vessels and partly because wartime prosperity (plus a few sharp practices here and there) made it difficult for the owners and crews to adjust themselves later to a peace time economy.

### Many dhows in Goa

There still are plenty of sailing vessels about in these waters—almost all the fishing craft and a good many of the estuarial and coastal traders still sail. In Goa, for instance, there is a large fleet of dhows of one sort and another (their names differing not with their rigs, but with their local hull forms) which finds employment ferrying iron and manganese ores from up-country to the roads off Mormagao, where usually anything from 10 to 15 tramps may be seen loading the stuff for Japan or for Germany. The iron ore is mostly mined near rivers or creeks, where the dhows can load it. Goa sits across the two important rivers Zuari and Mandovi, both of which are very useful for dhows but of no use to ocean-going steamers. Mormagao is an all-year-round port, and the dhows find constant employment in serving it.

These dhows are undecked, though some are over 100 tons. They all have two masts and many set lateen tops'ls over the big mainsail. Their sides are carried up with matting, the better to keep out the spray—as also are the sides and bulwarks of the small Arabs in the Red Sea and along the coasts of the Hadhramaut. To lift iron ore they have to be well built vessels, but they operate almost entirely within sheltered waters. The crews live aboard, usually under a bit of a shelter rigged up over the small poop,

*No longer economic, these old-timers are being left to rot. They were ocean-going two-masters once*



*A sailing lighter. Note bulwarks of matting made from the coconut palm*

and the vessels are about as primitive as they can be. There also are many large canoes used for river trading. Some of these use a single square sail, others a small lateen. They are always built up with sewn planks, and their auxiliary "power" consists of four or six small sweeps. It is astonishing how much cargo can be packed into these canoes. They mostly bring timber, firewood and earthenware pots to the main markets, such as Panjim, and take rice and other necessities up-country. Their trade is purely local, for there is no connection in these days between any Goan and Indian Union ports.

### Dried fish and firewood cargoes

At Panjim I also saw two fine big dhows, Indian built, of the type which the Arabs called "kotias." They were baggala types—except that they had no quarter galleries—of 150 tons or so, decked two-masters which could step a temporary third mast at any time by the simple process of setting up the longboat's mast on the after end of the poop. (I have seen many Indians and some Arabs do this.) All these vessels carry the old fashioned longboat, which is used both to work cargo in and out, and as a tug. The two I saw at Panjim, I was told, had come from Diu with dried fish and would sail back again with firewood.

Later, both at Daman and Diu—the two Portuguese outposts which roughly face each other across the mouth of the Gulf of Cambay—I saw several more of these big fellows. They were fine, shapely ships, much better built and a little better rigged than the average Arab. Also at both these places there are large fleets of sailing fishermen. Flying down from Karachi to Goa and going back by sea there was scarcely a moment when the horizon was not broken by the peak of at least several lateen sails, and in the nearer coastal waters there were always fleets of them. The Diu fishermen are famous, and their locally dried fish is exported by dhow to ports as far away as Mombasa and Zanzibar. The fishing dhows were mostly undecked two-masters of anything up to



## WHERE SAIL SURVIVES. . .

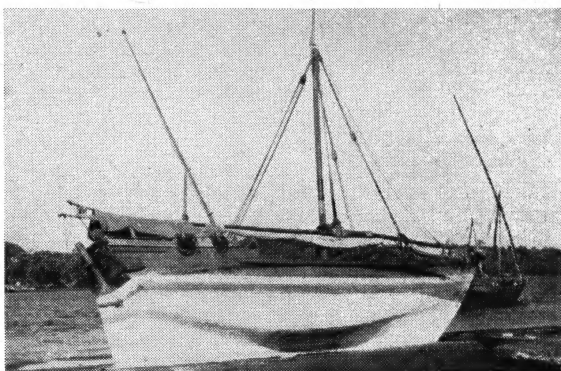
30 tons, and I must have seen a fleet of about a hundred of them at work in the fish-rich waters off Diu.

Along the Ceylon beaches fishing is a more primitive affair, carried on exclusively under sail or paddles. At Galle there was a fleet of over a hundred small canoes, called "catamarans" locally, though none was twin-hulled. They were narrow, high canoes built up on a single dugout with a big outrigger to windward and a short mast carrying a sort of dipping lug, the mast being lashed to one of the outrigger spreaders. These vessels carried steering-boards at either end so that they could go about by simply heading the other way, shifting the sail end-for-end and, so, always keeping the outrigger on the same side but to windward.

I thought these so-called catamarans were a somewhat primitive lot—the crews appeared always to comprise three or four taciturn fellows, dressed in the blue jackets and big straw hats of British seamen of half a century ago—until I went to other beaches. At a place called Negombo, 20 miles north of Colombo, there were canoes by the score even more primitive as well as little craft made by the simple process of lashing together four very roughly shaped logs. The two centre logs were square and the outer logs had a little shape to them, and all were designed to provide a bit of sheer to the bow. On this primitive arrangement, propelled either by a simple little sail spread on a couple of light poles or by means of a paddle made from a piece of cut bamboo, a fisherman goes off for a morning's sea fishing. He sits on the logs—and he gets wet. He fishes by line only, and he comes in to sell his catch at a beachside market or on the beach itself, simply as the mood strikes him.

Surf boats were also here—as at many other beaches in Ceylon. They are used for running out large nets, which are then hauled in laboriously by gangs of men and boys stationed on the beach at both ends of the rope. Usually they take in the slack around a convenient coconut palm. These surf

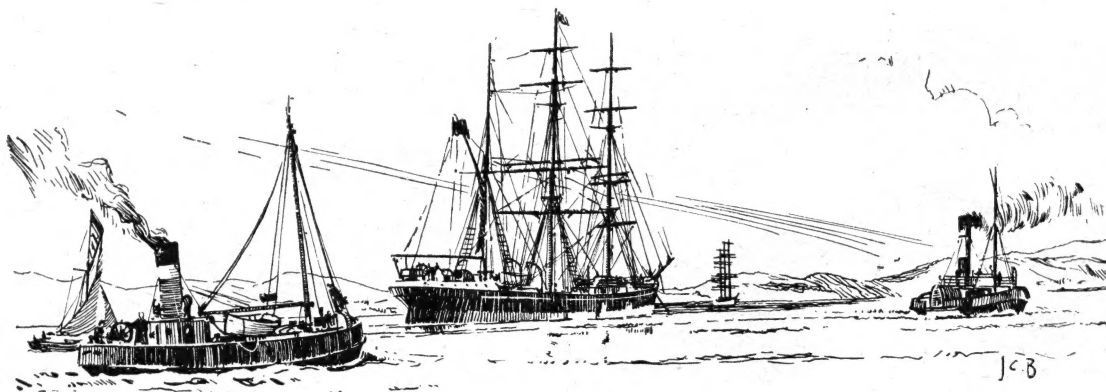
boats also were most primitive. At Galle they were flat-bottomed double enders, built up on a couple of dugouts placed to face one another, with a bottom of four planks sewn together to form the floor. The sides were sewn planks, and bow and stern were shaped to jut upwards. Caulking was by means of compressed coconut fronds sewn along the seams with coir cordage, and I watched a couple of fishermen repairing one of the boats by this means, at Galle.



*Dried out on the beach at Goa to re-pay the bottom*

At Negombo the boats were similar but a little smaller. Most of them were 25 to 30 ft. long with a beam of about 4 ft. The wood used in them seemed about as poor a quality as could be obtained, and both the shaped dugout sections and the planks themselves were liberally covered with repairs. These boats seem to be used only for the net fishing, but at Galle they land cargo too.

There is a move afoot in India to do away with the sailing coasters and not so many are now built. In Ceylon there are several foreign experiments in progress to improve fishing methods, but the beach fishermen look upon them with disfavour, preferring their own well-tried craft and methods handed down from the ancient past. It is likely that a good deal of sailing will survive in these waters at least for many years to come.





# Building an early Sixth Rate

**R. J. COLLINS** continues with instructions for making the hull and deck details of this fascinating little model

SINCE THE LAST article was published I have seen a copy of Culver's book of ship models. This is quite a rare book of pictures and one of the plates depicted a model very like the one I am doing here, and of which I had been informed there was no model. Fortunately, the one shown is in England, at the Pitt Rivers Museum of the University of Oxford. Through the kindness of Mr. T. K. Penniman of that museum I was able to see two very fine photographs of the model. To my great relief there is nothing in the general lines to put "mine" wrong, but some of the internal arrangements are different. Unfortunately I shall not be able to see the model until after this is published so I by-pass the one or two doubtful pieces until the next instalment. The chief of these is the position of the riding bits.

There is also the question of the whipstaff. In the Pitt Rivers Museum model the rudder is controlled by a tiller, as are the rudders on later (1705-1719) models I have examined, and one wonders if a whipstaff would be fitted on such a small ship. On the other hand the presence of a poop cabin as shown in Keltridge's draughts both of old and new design makes the working of a tiller if not impossible, at least very awkward. I hope to clear up this point also next month. It is in bringing out these problems and arriving at some solution or com-

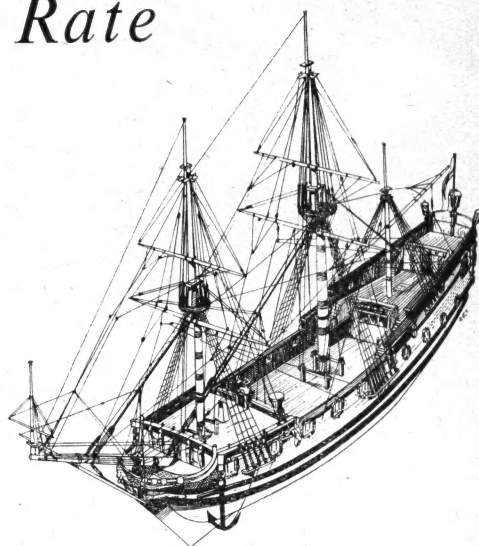
promise that modelling becomes so valuable to real nautical research.

Although actually a part of the rigging I have decided to mention dead eyes at this juncture. In diameter they should be half that of their mast and about half their diameter thick stropped with iron (I used copper wire) which is extended at the bottom to form a small loop. Into this loop is hooked the top end of the chain plate. The plates are comparatively short and, on the models of larger ships, show a definite outward bend instead of the straight line one would expect. The channels are left natural colour, the dead eyes and their strops black.

Two cheeseruns (see Fig. 28, page 117 April issue) are fixed down the side of the hull—the forward one is the thicker and contains a sheave for the sheet. The depth of these must be sufficient to clear any of the protuberances on the hull, the port wreaths for example.

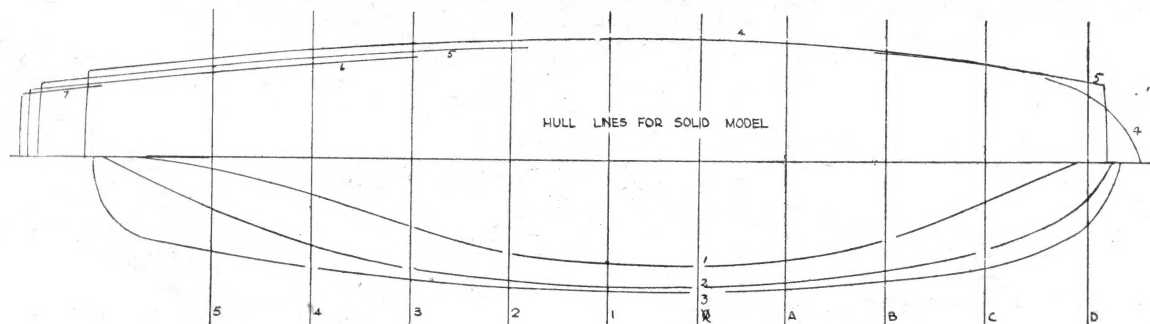
Further aft are the footholds both on the port and starboard side. These can be moulded with one of the small cutters used for the main moulding. There are 2 ft. long  $\times$  6 in.  $\times$  6 in. They take the colouring of that part of the hull upon which they rest. Fig. 29.

*The quarter lights!* The window itself, like those in the stern, can be made of transparent perspex, about  $\frac{1}{16}$  in. (actual) thick. The frames can be cut from thin card, which has a number of disadvantages; cut from metal like the frames on a lot of the old models; or their position deeply scored on the surface and thin wood

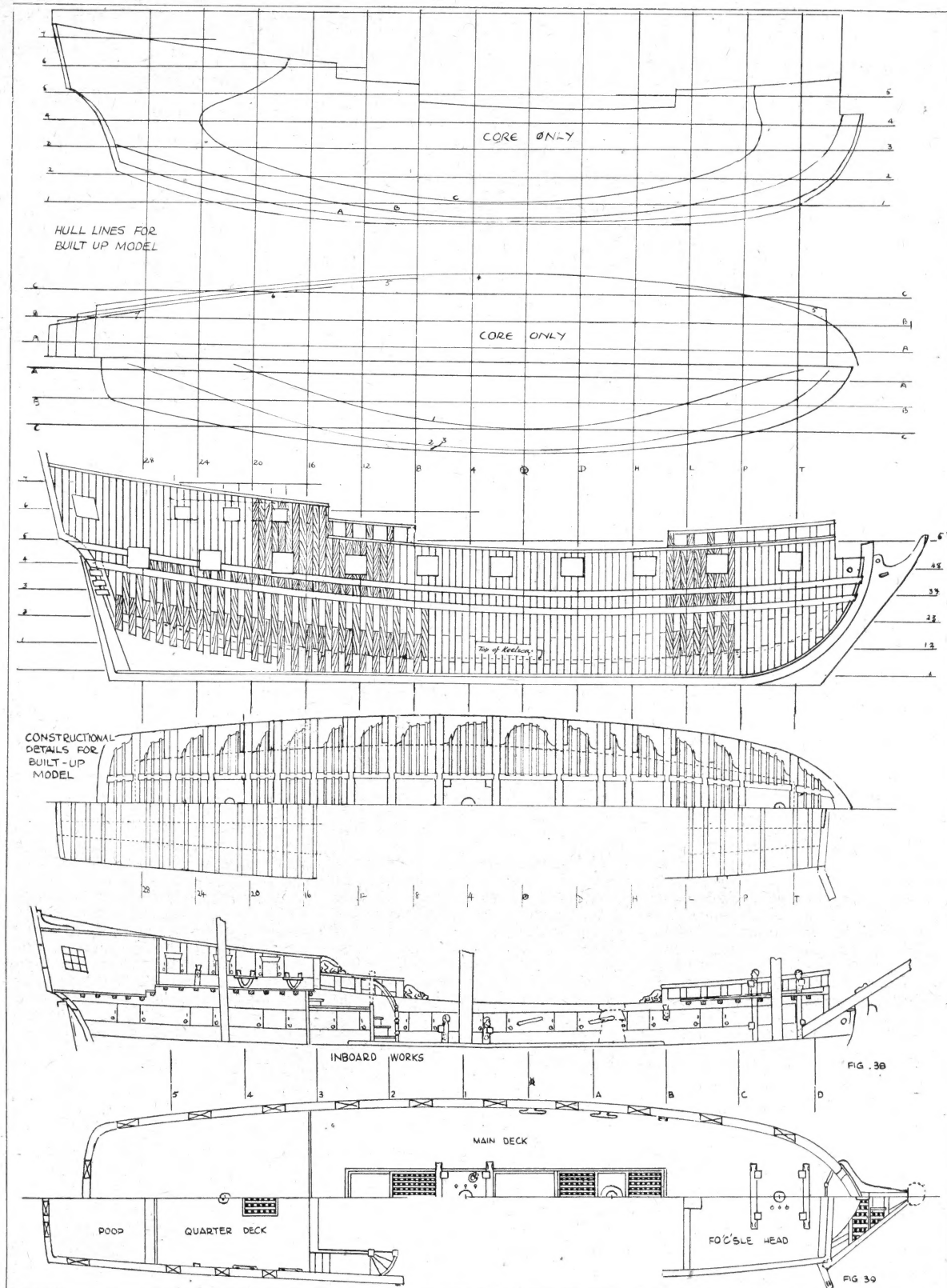


glued into the grooves. This last method seems to have more advantages than any of the others. The carvings surrounding the window will be seen to have four distinct parts, two sides, top and bottom; cut one each of these in outline from thick wood, divide down the middle and round off. On the other hand, provided that the style is in keeping, you could design a "built-up" job. The curved framing of the counter is best built up like the port wreaths as it is the same design. Fig. 30.

At each break in the sheer at the top of the hull is a pair of ornamental figures. These are known as "hance pieces." One of these is on the side of the hull and consists of a "drop piece," in this case a female figure which by now you should be able to carve blindfolded. The other figure on the rail is copied from Keltridge and consists of a dog with its head down between its paws and its other end in the air. This type of ornament appears quite frequently on the ships of the Stuart period. As usual this was made in a long cross piece and









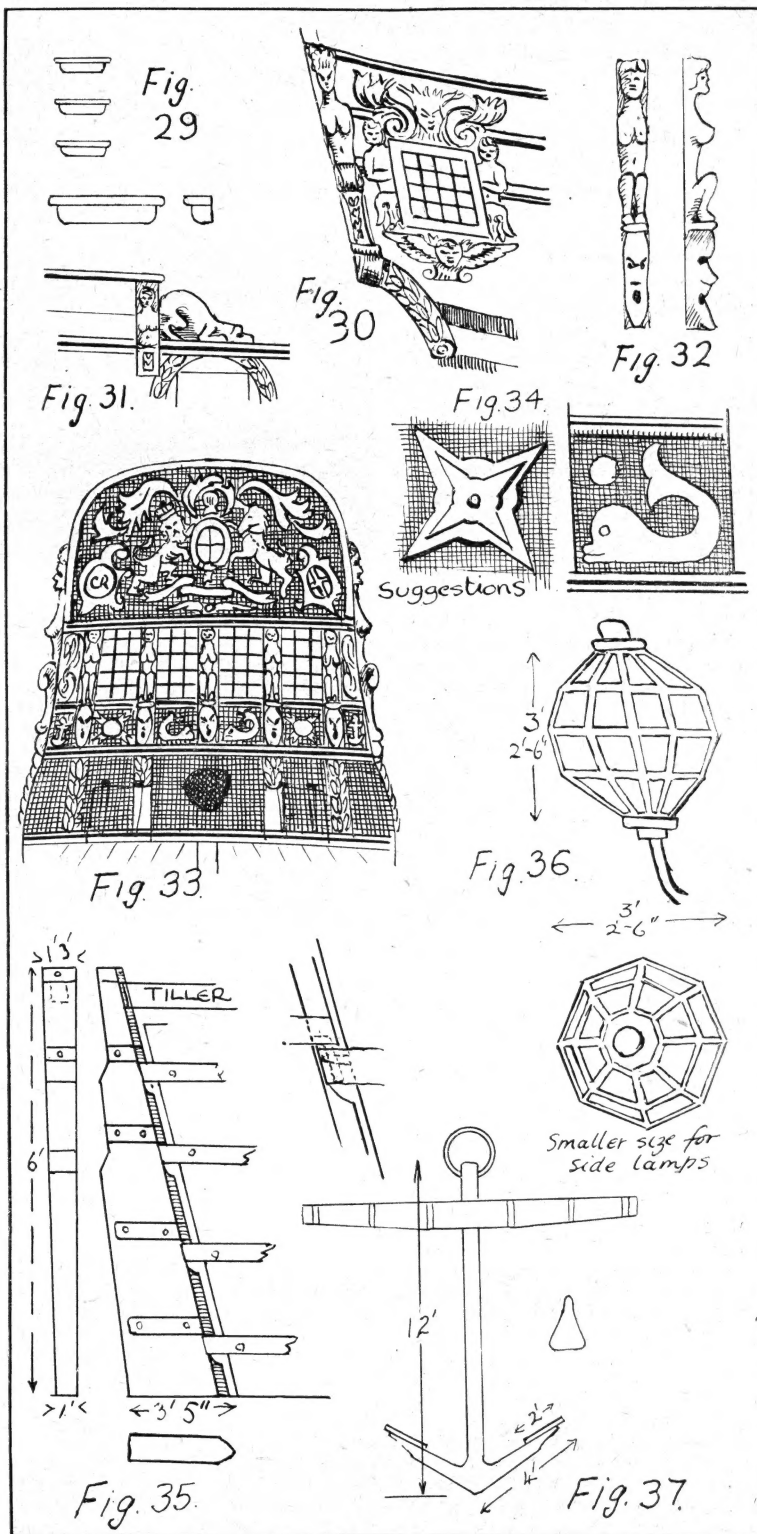
parted off, then rounded and trimmed. I have a few wood engraving tools and find them very useful for this small work. Fig. 31.

At the stern the windows are separated by long columns of carving which I have designed as a rather grotesque figure with a gargoyle head beneath. This is typical of the period. These, as well as the more or less similar ones on the bulkheads, were made by cutting the outline across the wood, parting off and rounding with a small file, etc. Fig. 32. The elaborate coat of arms I made by a combination of various methods. The shield was cut from wood and rounded very smooth. The two animals were cut from card "contoured" in three layers. The rounding was done by building up with modelling clay. If you use modelling clay remember that it does not adhere by itself, so put a thin layer of glue on the base immediately before applying. Do not make the clay too wet or too thick as it will crack when it dries out. The foliage was the easiest of all. I cut this out flat from a piece of thin card. Bent and twisted it to shape and glued it on to the base. The chain around the unicorn's neck is a piece of cotton. The whole painted with gold paint. In some cases the shield was painted in natural colours instead of gold and this does add to the general effect. Fig. 33.

The panels on the counter and the beakhead bulkhead are formed by the carved columns and the heavy mouldings. The central designs are just built up with layers of card. Fig. 34. It is more convenient to gild the ginger-bread work before fixing into position.

**Rudder.** This is of the usual type. Length 16 ft., width at the bottom 3 ft. 5 in. and contracting by means of a taper and two steps to 1 ft. 3 in. at the head. Its thickness is the same as the keel at the bottom and 1 ft. 3 in. at the head. It is hung from four pintles which I made from bent pins and brass shim. Into the stern post are pressed four eye-bolts with a strip of shim bent around them just level with the top. Into the rudder is pressed the corresponding bent pins, also with their strip of shim. Fig. 35. The drawing will make it clearer. Incidentally, the old name for the rudder was "pothar." I don't know whether this was only a different spelling or a different name.

**Lamps.** There are three of these. They are roughly ball-shaped and I find the best way to make them is to cut (turn them if you have a lathe) from solid perspex. If you have turned them, flatten off the panes allowing for the slope of the axis and build the top, bottom and framing



# 'Loch Etive'

A realistic scenic model of a famous sailing ship of the 1870s

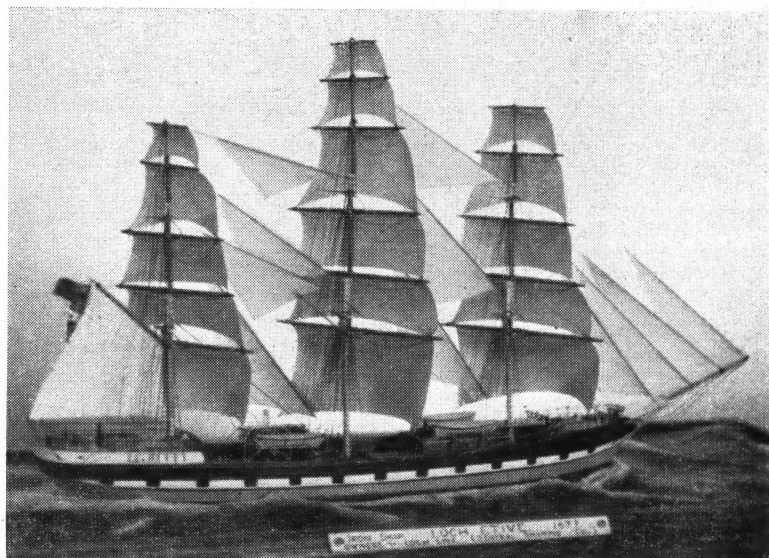
By J. A. THOMPSON

THE DESIRE TO have a model of a sailing ship in a realistic setting gave me the urge to build this model—involving some 180 hours of very enjoyable work.

The main hull structure was made from a type of pine, the bulwarks recessed between the fo'c'sle and poop blocks are of satin walnut 1/32 in. thick. This latter wood, being of pleasing appearance and showing no grain, was used for the deckhouse, companions, skylights, hen and sheep pens, wheel box, etc. As all these fittings on the prototype were of teak I found that by doing all the panelling with a 9H pencil followed by one application of french polish—which gave a faint shine—the result was quite effective.

In this model I have made full use of Reeves' ship model paints, and find them ideal. The decks were of Bristol board painted Reeves' old oak and then lined with the 9H pencil, the lines being a bare 1/32 in. apart. The turned stanchions are of satin walnut turned up on my small lathe, the surmounting rail being of Bristol board and the ball head of the stanchion showing above. The iron railings around the fo'c'sle and poop consist of some fine pins surmounted with Bristol board rail painted to represent teak, the intervening rails being thread glued on and painted white.

The capstans, binnacles, parts for the dolly winch, and wheel rim were turned out of boxwood. The wheel rim is drilled for 12 spokes; these are wire threaded to the hub, turned from



brass. The main pumps are made of wire and two small watch balance wheels; the spokes do not take the S shape as seems general but it looks fairly well.

The anchors are made from brass, the stock being a suitable pin and the head bent over. The pin passes through the shank, and a blob of glue forms the "ball" at the other end. I made two spare top masts from sycamore and stowed them on chocks on the deckhouse, their forward ends rest on chocks on the after edge of the fo'c'sle. There were no spare spars shown on the drawings, but they add to the effect. I think it was general practice to carry spare spars on this type of vessel anyway.


All the masts and spars with the exception of the three lower masts and bowsprit, were of bamboo, the latter of sycamore. The spreaders, martingale and cross-trees of hand wire. The rigging is of fine thread, Nylec and Terylene. The Terylene is very fine and is used for the lighter standing rigging and the running

gear. I got it in black and biscuit colour. The sails are made from typewriting paper and the cloths, creases and one or two patches added with the 9H.

A piece of wood from an ancient piano made the "sea." Plasticine is stubbed in near the hull to create the impression of broken water. I chose the white enamel, clear varnish, and oil-colour Stainer's method, and was highly satisfied.

I wanted to show a fairly interesting "sea" and after consulting Jason's book I chose force 4-5 in the Beaufort scale. I do not suppose winds of that force bothered the *Loch Etive* under all plain sail—she was reputed to have been a stout ship.

The model was made from drawings by H. A. Underhill, and is built to the scale  $\frac{1}{16}$  in. = 1 ft. This is my first attempt at this scale.

*Passe-partout* tape holds the glass of the case, the base of which is of wax-polished oak. The cost of the case, by the way, was much more than that of the model! 

## Building an early Sixth Rate (Continued from page 143)

on to them with various thicknesses of card. It is very difficult to stick anything directly to perspex, but if all the framing is well stuck together it will hold itself around the lamp. Drill a small hole up the bottom (it will look like a large candle from the outside). Roughen the end of a piece of wire and bed this into the lamp with balsa cement. Stick the other end of the wire into the taffrail of the ship. The lamps are polished transparent and the framing gilded. Fig. 36.

The last of the outside fittings of

the hull are the anchors. These are of the standard pattern and are shown with their dimensions in Fig. 37. I use the plural because there are two—one either side. The various ring bolts which are fastened to the side of the hull will be described as they are reached in the section on rigging.

*Colour of the hull.* From the keel to the water line or where that meets the lower wale is white, the two wales black. The flat surface of the beakhead, black as shown in the figure of the bow assembly. Capping rails,

rail timbers and the timbers of the beak are also black. The hull surface between the two strakes of moulding level with the quarter deck is black or red with floral scroll in gold shaded with brown. All carvings are gold. Do not use a glossy paint for the white. I do not think you can do better than use Reeves' model maker's colours. Varnish the entire surface, except the white with pale oak varnish. This will kill any newness in the other colours and bring the boxwood up to a very lovely old gold effect.



# Hull for a sailing clipper

**I**T WOULD BE very nice for us model makers to have unlimited supplies of material, tools, time and patience. The high cost of some materials today suggests economy where possible, and if this economy can be linked with less labour few of us will grumble.

The usual methods for building a model hull are:

1. Carving from a solid block.
2. To use metal, if appropriate, for the prototype.

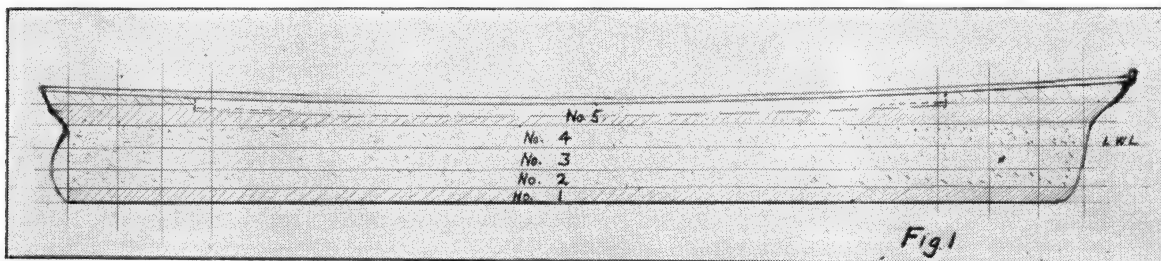
## An interesting method of hull construction used by F. W. BOYD in building his clipper *Ariel*, for which he was awarded a Bronze Medal

with vertical laminae it may be possible to cut an outer piece from the interior of an inner one provided the hull has not a long parallel body.

*Ariel's* hull was obtained from one plank planed to 7 ft.  $\times$  10 in.  $\times$  1  $\frac{1}{4}$  in.

the sheer, are the third group. The portion No. 2, 3, 4 may well be taken first.

Fig. 2 shows a portion of the 10 in. plank. It is squared all round and each station marked across it and then marked with lines parallel to the working edge at 1 in. intervals. Half the thickness of the stem and stern pieces is deducted from the half water line patterns and the shape of No. 2 pattern is transferred to both the edge and the first 1 in. line. These two lines represent the layers 2a and 2b and form the port and starboard sides



Hull profile showing layers

3. To use lamina, commonly called bread and butter (these can be used either horizontally or vertically).
4. Rib and plank.
5. Paper strip.
6. Fibre glass.

The cases of Nos. 2, 5 and 6 usually present the problem of a mould or former which becomes waste. No. 4 is most economical in the quantity of material used, but not necessarily in time and labour, as fitting and watertightness are involved. The alternatives are Nos. 1 and 3. Carving a hull from the solid can be left to those who like hard work, and who do not begrudge paying considerably more than they need for the wood.

A comparison based on an actual model is of interest, the model being the clipper *Ariel* which was on view at the last year's MODEL ENGINEER Exhibition. Her dimensions are: length 43 in.  $\times$  beam 6  $\frac{3}{8}$  in.  $\times$  depth 7 in. A block this size contains more than a cubic foot of wood.

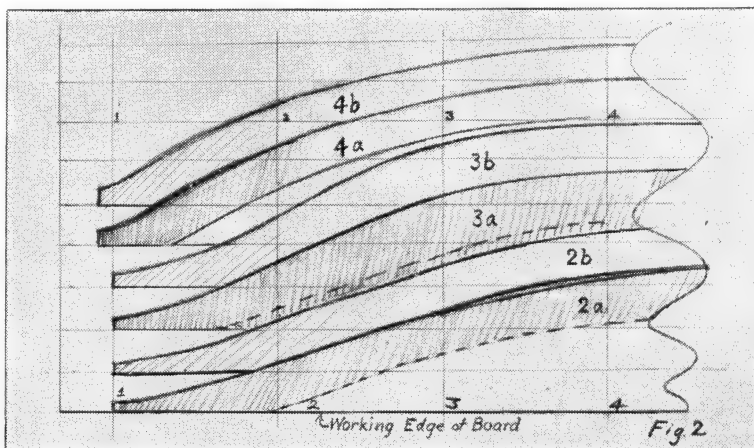
If the usual bread and butter method is employed each sawn 1 in. plank usually loses up to  $\frac{1}{8}$  in. off each face during planing. A plank  $\frac{3}{4}$  in. results, and 25 per cent. is lost before any shaping has taken place. With horizontal laminae rather more volume of wood is required than with the solid block. However,

which is less than 60 per cent. of the volume of a solid block 43 in.  $\times$  6  $\frac{3}{8}$  in.  $\times$  7 in. The method used for economical cutting is largely based on the way repetition curved shapes, e.g. chair back rails, are cut in industry.

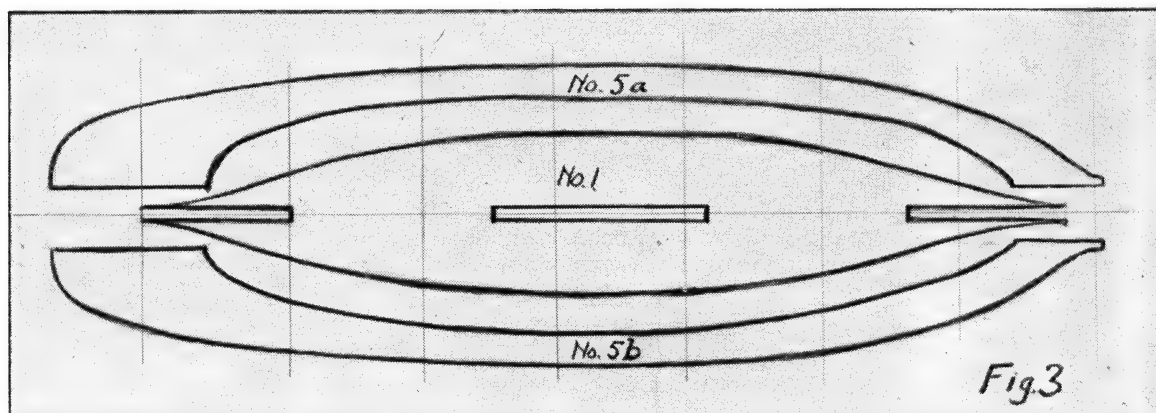
Now let us consider Fig. 1. It will be seen that the sheer plan is divided into three groups of laminae. The lowest, No. 1 and No. 5, are one group. The portion 2, 3, 4 is the next and the odd pieces, building up

respectively. It will be seen that the inside of 2b lies snugly against 2a and the waste is negligible. This process is repeated with layers 3a, 3b, 4a and 4b. A little extra waste may be obtained between the second and third layers or the third and fourth layers, where the curves are dissimilar. The remaining corner pieces and the inner piece of 2a are used for building up the sheer, which does not need long lengths of wood.

Marking out stern end layers



## Hull for a sailing clipper . . .



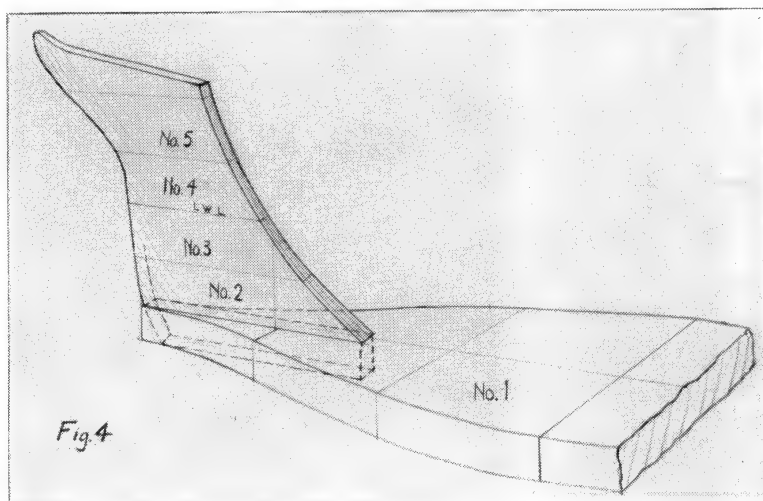
Above: Scheme for cutting out layers 1 and 5

Below: Fitting stempiece into baseboard layer No. 1

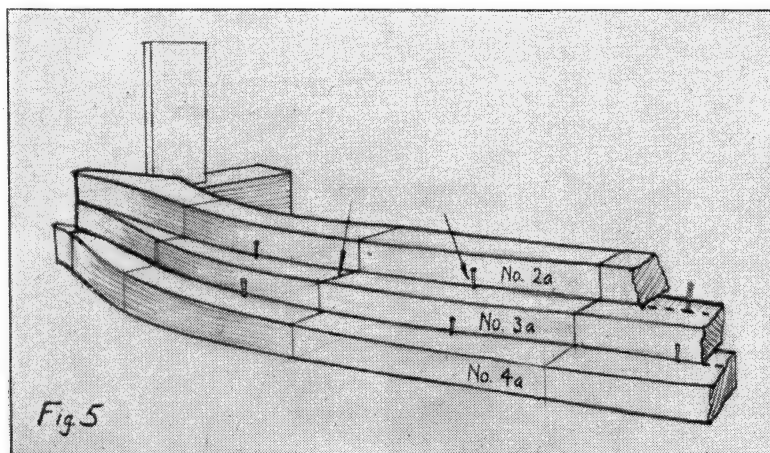
In the next section a change is made in the arrangement of the layers; No. 1 is drawn on a centre line and No. 5 divided and drawn each side of it (see Fig. 3). Again there will be material for building up pieces especially if a little extra length is allowed.

### Fitting keel

At this stage, as the vessel is to sail, it is necessary to consider how the keel is to be fitted especially if it is detachable. And it is advisable to prepare No. 1 layer before assembling commences. Real clippers carried ballast; plenty of it. In the 1860s they carried some 150 tons between the frames in addition to their cargoes, so a detachable keel steadied by fitting into a slot was decided on. This slot is shown in No. 1 layer. While slotting for the keel, slots  $\frac{1}{4}$  in.



Positioning layers for gluing



wide should also be cut in the ends to receive the stem and stern posts, which are fairly wide and cut from  $\frac{1}{4}$  in. resin-bonded plywood. Mark the position of each lamina on these ports and fix in position (as Fig. 4).

For ease of handling the three layers 2a, 3a, 4a and then 2b, 3b, 4b can be assembled as sections. Carefully mark the position of 3a on 4a and 2a on 3a, etc., and partially drive panel pins at convenient intervals along these lines (see Fig. 5). This enables each piece to be quickly and accurately positioned on its neighbour when being glued and cramped. Before fixing these layers to No. 1 the insides may be shaped. Glue them to No. 1 and the stem and stern pieces, add the sheer and solid pieces to receive the bowsprit and form the supports of the anchor deck and the monkey poop

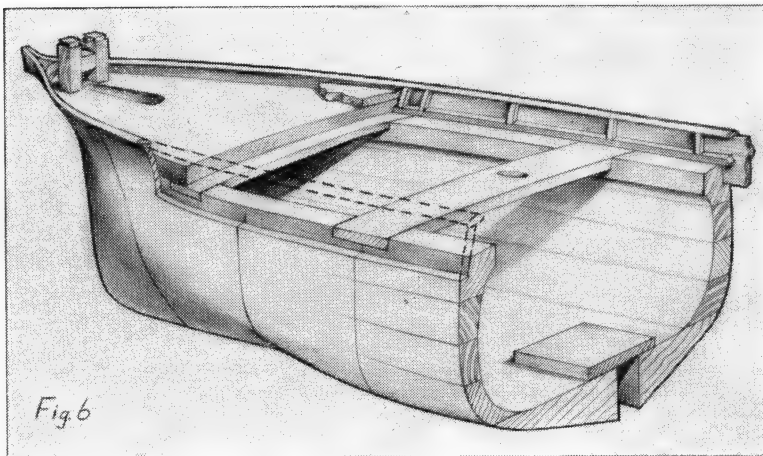


(see Fig. 6). Shape the hull when the glue, which should be one of the waterproof resins, is set.

Gunwales are strips of plywood fitted into a rebate along the deck line and terminate at bow and stern where the curve becomes sharp (Fig. 6). They may be steamed—from the kettle spout—or cut with the two outside plies running vertically. Fitting them is far more simple than appears at first sight. The thickness is gauged round the top edge by the deck, but for marking along the hull side, take the gunwale, which should have one edge planed straight, and temporarily pinned in position. Bending will throw the lower planed edge a little out of straight, but a clean line can easily be traced or scribed along it.

#### Cutting rebate

Here is a hint for cutting the rebate: do not begin by forcing the chisel along the marked lines—i.e. with the grain. Sink the cutting edge across the grain at small intervals and so sever and free the fibres. The chisel is now gently fitted into the marked lines, with the grain and the whole cleared out.



*Sketch showing construction of hull and fo'c'sle head*

Lastly, for the deck and capping rails of the gunwale, a return to the method of marking Nos. 1 and 5 layers is employed; that is, the rails are cut in two halves from the curved pieces left outside the deck. As the

hull slopes inwards at bow and stern sufficient is gained in the length of the deck to provide material for the anchor deck and monkey poop to have a small overlap for them, and still have ply for the rails. ⚓

## READERS' QUERIES

### Plank on frames model

I am just about to begin on the construction of a 12-gun brig of war (hull 31 in.) which is to be a sailing model. As I have never before attempted a plank on frames model (all my previous models being built on the bread and butter principle) I am at a loss to know what wood to use and where I might obtain it.—R.M., Hayes, Kent.

*The keel, stem and stern post of the model could be made of beech or mahogany or any semi-hard wood; oak is inclined to twist and should be avoided. In two planked models resin-bonded plywood has been used for the frames (4-ply in one instance). This avoids trouble with grain and the results have been quite satisfactory and permanent. For the planking, pine is the best wood to use. Many model yacht builders use mahogany, but this must be of good quality. Cedar is also suitable as it has a straight grain and takes a good finish. In models which have bluff bows, it is advisable to reduce the*

*thickness of the plank toward the bow to help in bending. It is essential, of course, to steam it, particularly near the bows. It will be a great help if the forward end of the plank is secured to the stem by means of small brass screws immediately after steaming and then bent backward, pinning it to the frames and securing it temporarily to the stern post. If one or two pairs of planks are done in this way and let set for 24 hours, they can be taken off the next evening, fitted carefully to the previous planking and glued and screwed in place.*

### Trading-ketch

What became of the trading-ketch *Anna* which was once owned in Galway by a Mr. Hernon, who made several trips to the Clyde from Irish ports with her? What were her dimensions, tonnage, etc.?—B.J.O'D., Galway.

Readers' help is invited in providing this information. Please write to Editor, SHIPS AND SHIP MODELS, 19/20, Noel Street, London, W.1.

### Making smoke

I have been watching the columns of SHIPS AND SHIP MODELS for some months hoping to find some information on how to provide smoke without heat in my model of a passenger/cargo coaster, electrically driven. My model is 30 in. long with a beam of 4½ in. so there is not a lot of room. The hull is of wood, so anything but very slight heat is ruled out.

I want to make smoke for the funnel purely for realistic reasons, and I feel sure that some modeller must have wanted to do the same thing at some time.—R.D.H., Jersey.

*The usual way of making smoke come from the funnel of a model steamer is to have a container filled with cotton wool saturated in liquid ammonia, and to arrange for hydrochloric acid to be fed in drips. A little experiment will soon enable the quantities to be decided. The effect of the acid is neutralised by the liquid ammonia, and consequently the metal suffers no damage from corrosion.*

# Spring loaded boom control

H. C. ALDRIDGE concludes this series with the description of an ingenious device which may be used in full sized—as well as radio controlled—yachts

DECK FITTINGS ARE kept to a minimum and, apart from the mainsail sheets previously described, there is only one essential addition. Necessity being the mother of invention, I have devised a spring loaded boom control which also incorporates the kicking strap. The invention is somewhat revolutionary, and in view of its application to full scale yachts, I have taken out a patent for the latter purpose. The principle is, however, so simple that it is difficult to imagine why it has not been used previously.

My problem arose when I worked my winch to pay out the mainsail to the running position. The winch, being power operated, could only allow the sheets to pay out without fouling provided the mainsail and boom were under tension at all times. In a strong breeze this is usually possible but it is by no means certain, and if the mainsail slacks off for a brief moment the winch overruns the sheets and trouble ensues.

## Full scale problem, too

With a very light breeze I found it was impossible to let out the sheets without pushing out the boom by hand. This problem, I understand, also applies to full scale yachting, when a member of the crew has to go forward and push the boom, and, as often as not, has to remain there and hold it out while the craft is running. The problem, therefore, is to devise a fully automatic spring loading on the boom so that it is always pulling it towards the running position whether the yacht is on a port or starboard tack. It must not, however, prevent the boom from swinging from the port to starboard tack when sailing close hauled, nor from swinging freely from port to starboard during an intentional jibe.

The result is obtained by what can best be called a cantilever action. The following diagram illustrates the principle involved.

A 6 to 8 in. length of  $\frac{3}{16}$  in. dia. catapult elastic is fixed at its centre to the deck at a point  $1\frac{1}{2}$  in. forward of the mast. The two ends are joined to guys and passed round either side of the mast. Both guys are adjustable as to length by means of bowsers and are attached to the underside of the boom approximately one third along from the mast.

Tension on the rubber is adjusted so that both sides are equal and should be such that the boom is held at its maximum running position with the rubber on that side still remaining under very slight tension. It will be seen that the other half of the rubber coils itself round the mast and exerts no strain on the boom except along its axis. In the close-hauled position and for about 20 degrees on either side the rubbers exert equal strains, but beyond these positions, depending on the tack, one or the other exerts its influence and pulls out the boom.

The whole thing is so simple, and for this reason I think it is all the more effective. Only experience will tell whether it is practicable for full scale yachts, but for models it is the only means of ensuring unhampered control of the sheets. With it I have sailed my *Painted Lady* out of visual range and operated all the controls by signals sent to me by friends who accompanied her on her journey.

If these articles encourage a few of the hundreds of model yachting enthusiasts to change over to radio control, I shall hope to meet them at future championships. With the help of the members of Bristol Model Radio Control Club I shall be pleased to do my best to answer any of your radio problems and through the medium of this journal I shall welcome your observations.

Good sailing to you all and, remember, "make your boat water tight."

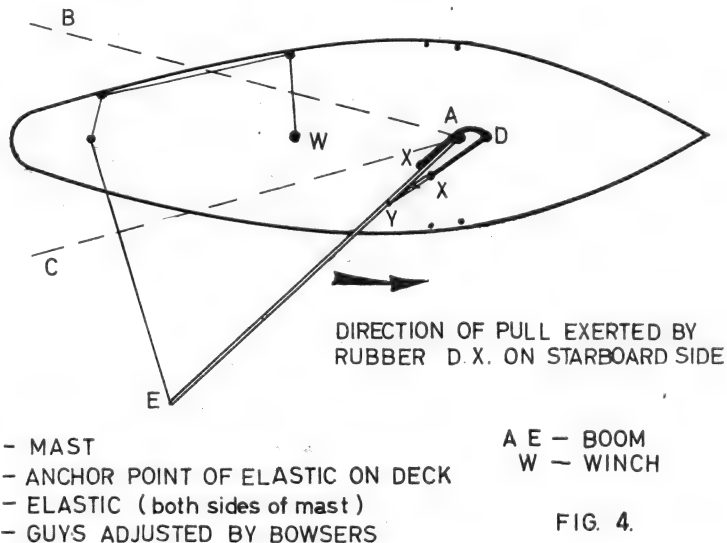


FIG. 4.

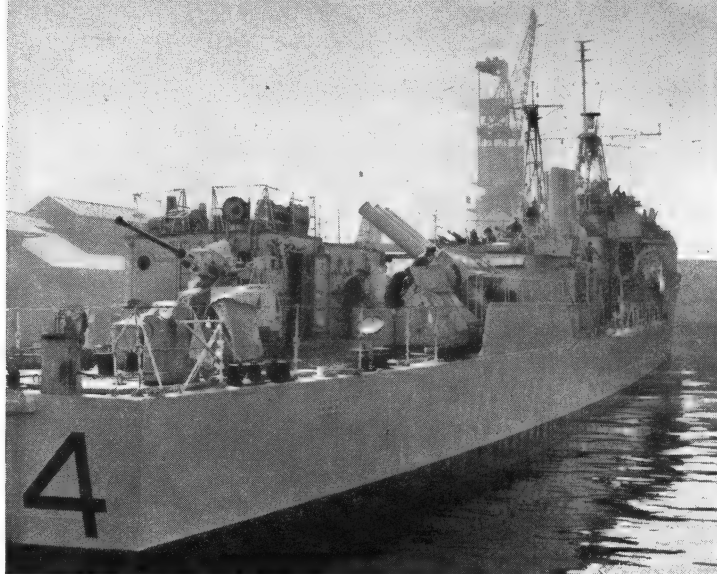
The invention involves the principle that the boom will only come under tension from the rubbers when it reaches a point to the port side of position B or the starboard side of position C.



# Naval Photograph Club

By P. A. Vicary

*H.M.S. Hardy, the Navy's  
new anti-submarine frigate*



IN THE NAVY Estimates for 1956-57 a number of new ships are to be laid down. These include two more vessels of an improved and larger "Daring" class design. Two of these vessels were authorised last year. It is now proposed to give these ships an alternative armament of ship-to-air guided missiles. Five anti-submarine frigates are to be ordered while 12 frigates of various types will have joined the Fleet by April 1957.

Work on the three "Tiger" class cruisers is proceeding well: these vessels will be armed with the new fully automatic 6-in. gun turrets. The design of a new type of cruiser with anti-aircraft guided weapon armament is also going forward. The four front line aircraft carriers now in the active fleet are *Ark Royal*, *Eagle*, *Albion* and *Centaur*, while *Bulwark* is the trials and training carrier. The construction of *Hermes* and modernisation of *Victorious* are proceeding, and the *Warrior* has almost completed her extensive refit which includes fitting an angle deck. The carriers *Hercules* and *Leviathan* are for sale.

\* \* \*

*Vanguard* is to be completely "mothballed" and has been berthed alongside *Howe* in the Hamoaze at Devonport. Also in the trot nearby are *Alaunia*, ex Cunard liner (which is serving as a stokers' training ship), *Unicorn* and *Phoebe*; the destroyer *Zebra* is close by. It is expected that the carrier *Triumph* will be taken in hand for conversion to a heavy repair ship in the near future, and the *Perseus* to be converted to a submarine depot ship.

\* \* \*

H.M.S. *Hardy*, who recently paid a visit to London, is the pioneer of the Navy's relatively cheap, mass-produced submarine killers. Named after Nelson's captain, she is the first of the new ("Blackwood" class) post-war frigates to be commissioned. Frigates of this class are being fitted with the latest equipment for locating and destroying submarines with hull focus designed to enable them to maintain high speeds in heavy seas.

During air-sea rescue exercises off Thailand, in which ships of S.E.A.T.O. took part, a helicopter troop lift operation was staged between the U.S. aircraft carrier *Princeton* and Bangkok airport.

H.M.S. *Consort* and H.M.A.S. *Tobruk* rescued the pilot and four U.S. Marine Corps personnel when one of the helicopters crashed into the sea shortly after taking off from the *Princeton*. The aircraft, emitting smoke, plunged into the sea about 300 yards from *Consort* and *Tobruk* from an altitude of 50 ft. Motor boats from both ships picked up the helicopter's crew. Among the ships taking part in the exercises were *Newfoundland*, flagship of Vice-Admiral R. F. Elkins, *Newcastle*, *Consort*, *Comus*, the Australian destroyers *Anzac* and *Tobruk*, and the New Zealand frigate *Pukaki*.

\* \* \*

It is interesting to note that the submarine *Thermopylae* recently visited the West India Dock, London, when her captain presented to the mayor and councillors of Poplar, East London, a metal casting of her crest—a lion "statant"—in commemoration of the association between Poplar and the famous old tea clipper *Thermopylae*.

\* \* \*

A reference to the rescue—by helicopters of the Royal Navy and Royal Air Force—of 41 members of the crew of the Norwegian tanker *Dovrefjell* when she went aground on the Pentland Skerries is not amiss here. It was extremely difficult for a lifeboat to get close to the ship, and the frigate *Wizard* could only stand by and watch. Grateful thanks, in a message from the owners, Messrs. Olsen and Egleslad of Oslo, have been received by the Admiralty and R.A.F. for the helicopter crews' fine achievement.

\* \* \*

A new tug is expected to go into service at Portsmouth shortly. She is the *Confiance*, diesel-electric powered, 154 ft. long over all by 35 ft. beam. She will stay at Portsmouth for about 12 months before going out to Malta.

Jason reports on . . .

## Sheffield's Easter Exhibition

**H**ISTORY WAS MADE in Sheffield at Easter, when, for the very first time, the three local organisations joined forces for a comprehensive exhibition. The displays by the engineers and aeroplane model makers were excellent but, due in no small measure to the enterprise and enthusiasm of its power boat section, the Sheffield Ship Model Society's contribution was outstanding.

There was an improvement in the finish and detail work which, generally, I have not seen surpassed anywhere. One hundred ship models were on view, nearly half of which were power driven. Many were radio controlled.

Static models were not eclipsed by any means, but the awards indicated where the year's work had been done.

The principal award of the year, the Open Trophy, went to a society member despite strong opposition from outside contenders. He was Mr. S. Davison, with his diesel powered tug *Snowcem*. Mr. Harrison's *A.S.R. Launch*, also diesel-powered, was outstanding for its finish but failed to trounce the winner, a robust veteran of two years' "water work." The Ship's Bell, the highest award for members, was won by Mr. Stamper for his *Vosper M.T.B.*—

in the ever useful  $\frac{1}{2}$  in. scale. It was a beautifully clean job, well finished. He is not a pioneer in this type of craft and therefore had to face intense competition. But his layout and good hull work won the day. He won also the Power Boat Trophy against an imposing array of half a hundred power men.

The Accuracy Cup this year went to Mr. George Wilkins for his *Royal Barge* (1955). This is the model which did so well last year.

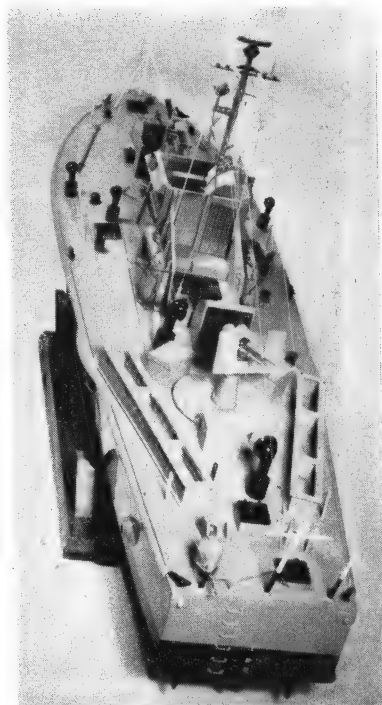
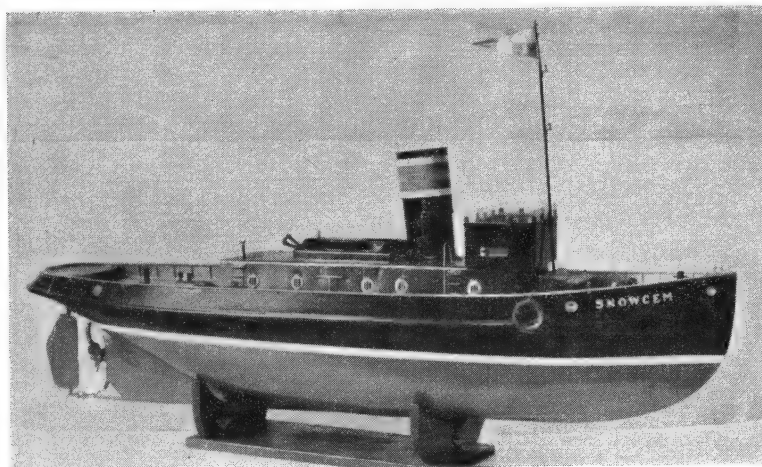
The highly coveted Workmanship Cup—no less than three were very close contenders—went to Mr. Davison with his *Algerine Class Minesweeper*, a 30 in. radio controlled power boat with an almost miniature standard of craftsmanship. This prize winner clearly indicates some very fine models in the near future.

The Rev. F. Overall secured the Originality Trophy with his 16th century *Mediterranean Galley* and the Miniature Trophy was won by Mr. Burgin's *Arab Dhow* against a weak opposition.

The New Members' Award was gained by Mr. Camerons' robust steam driven tug *Scotsman*. It did not have the finish of some of the other winners but it worthily upheld the steam unit which, I regret to say, is being ousted by diesel jobs.

The following are awards by the organisers of the exhibition:—

Winner of the Open Trophy was S. Davison, chairman of Sheffield S.M.S., with his radio-controlled tug



Top: This beautifully-finished *Vosper M.T.B.*, to Percival Marshall drawings, won two awards for D. J. Stamper, of Sheffield S.M.S.


G. H. Harrison, secretary of Brighthouse S.M.E.E. was awarded a first prize for his auxiliary schooner

Radio control power boats: Mr. S. Davison's *Snowcem*.

Power boats: Mr. Harrison's *A.S.R.L.*

Sailing ships: Mr. G. Harrison's two masted schooner.

Static steamers: Mr. N. Burgin's *M.T.B.*

Miniatures: Mr. N. Jones' H.M.S. *Revenge*. 



## H.M.S. LION

May 31 is the 40th anniversary of the Battle of Jutland and, appropriately, NORMAN A. COUGH contributes an accurate drawing of the battle-cruiser squadrons' famous flagship

CONTINUING THIS SERIES of detailed drawings of ships of the Royal Navy, I present here the first of a capital ship. The information for making it came from the drawings used for my model of H.M.S. *Lion* (now in the Imperial War Museum) which was made nearly 30 years ago with the assistance of the Admiralty.

#### The turning point

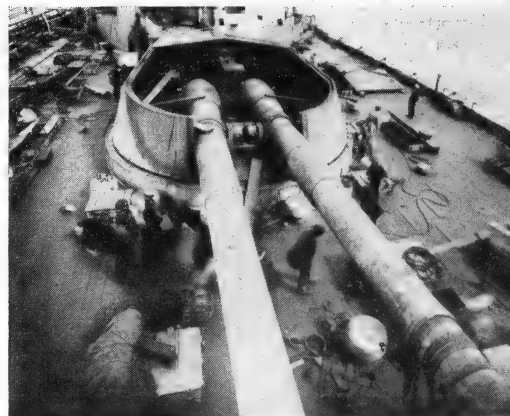
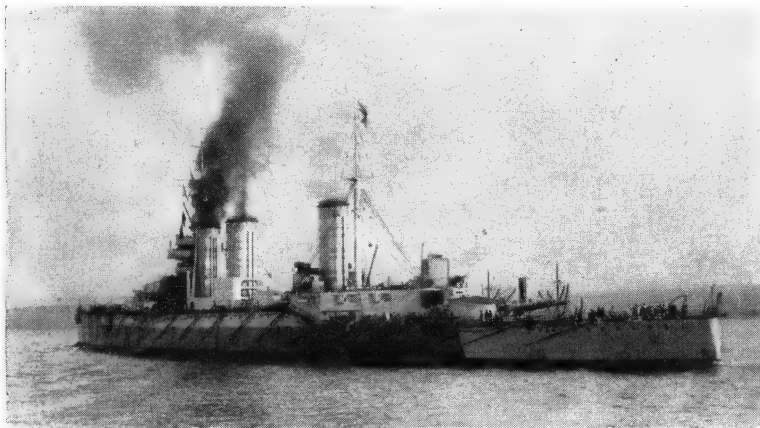
All the world knows that Jutland, the greatest sea fight in history, was the turning point of the first world war. Volumes have been written about it, both strategy and tactical dispositions have been analysed again and again. But one thing has emerged clearly: the fact that the fate of the world hung on the successful use of the supreme weapon of those days—the big guns of the Navy's heavy ships. Jutland was a gunners' battle, and only the lateness of the hour at which the main fleets became engaged and the very baffling light prevented it

from being fully decisive. But, after it, the German fleet made no second challenge.

#### Fine sight on the water

H.M.S. *Lion* is perhaps more a subject for the glass-case model maker than for those interested in power models. If built as a working model direct from the original of this drawing, which is  $\frac{1}{16}$  in. = 1 ft., she would have a displacement of about 9 lb. and would be of a convenient size to sail on a lake, but the detail, if added, would be rather fine and fragile. If, however, she was built to twice this scale, at  $\frac{1}{8}$  in. = 1 ft. her displacement would be about 55 lb. and her length 7 ft. 4 in. This is a large heavy model that would take a lot of transporting, but all the same she would be a very fine sight on the water as she could carry a great amount of machinery with radio control, and her 13.5 in. guns could easily be made to train and fire. For full speed she would need to be driven at the corresponding scale speed of three knots, which would give the correct wave formation.

*"Lion" with her camouflage*



*"Q" turret wrecked by a German shell*

The photograph of H.M.S. *Lion* taken from the port quarter shows an early form of camouflage including the dark area painted on the hull (used also in 1939-45) to simulate another vessel lying alongside. It must date from after the Dogger Bank action—as the struts of the tripod were added then—but before Jutland when she had no camouflage. It is not ascertainable from the records whether she carried (at Jutland) the net defence booms, which are shown on the drawing, but the nets were on board as may be seen in the photograph of "Q" turret—the one amidships between the funnels—taken a few days after the action.

It was here that Major Harvey, R.M.L.I., earned the V.C. when, although mortally wounded, he gave the order to flood "Q" magazine after the turret had been wrecked and set on fire by a German shell penetrating the 4-in. armour plating of the roof.

#### Weather decks planked

On the drawing a few parts are shown in dotted lines. These, such as the searchlight control towers on the after funnel and the aircraft platforms on top of "Q" and "X" turrets, were added towards the end of the 1914 war. The weather decks of all warships of this period, except those of destroyers, were planked as shown. But the shelter decks (those over the 4-in. batteries in *Lion*) were covered with the usual brown linoleum, called "corticene," as well as all the bridge platforms and the signal deck. In a model this makes for variety of colour as viewed from above. The roofs of the turrets were usually painted black, and the lengths of cable on the fo'c'sle, white. In wartime all the bright-work was painted over with the ship's grey colour to baffle the enemy's range taking.



# H. M. S. LION BATTLE-CRUISER, 1909-10 NAVAL ESTIMATES.

## LION

DESIGNPORT DOCKYARD, LAID DOWN NOV. 1909, LAUNCHED AUG. 6 1910, COMPLETED JUNE, 1912.

## PRINCESS ROYAL

VICKERS ARMSTRONGS, LAID DOWN MAY 1910, COMPLETED NOV. 1912.

## QUEEN MARY

FALKERS, CLYDEBANK, LAID DOWN MARCH 1910, COMPLETED 1913.

SUNK BY GUNFIRE AT THE BATTLE OF JUTLAND.

LENGTH OVER ALL 252 FEET BETWEEN PERPENDICULARS; 264 FEET BY DRAUGHT (INWATER); 271 FEET OVER ALL. DISPLACEMENT 29,700 TONS IN FULL LOAD. COMPLEMENT 1300. LION FITTED AS FLAGSHIP (BORN COVETICUS). ARMAMENT: 4—15.3" B.L. GUNS (CONTROLLED); 15—4" 50 CAL. 2—3" P.M. 4—3" P.M. 3 MACHINE GUNS, 10 LEWIS.

2 SUBMERGED TORPEDO TUBES (BROADSIDE). ARMOUR: 5" AND 6" SIZES. 15—3" 50 CAL. AND ART. TURRETS 12" TOP PLATES 4" BARBETTES 6" 8" CORNING TOWER 12" PROTECTIVE DECK 2 1/2"—1 1/2" 2" 11" PROTECTIVE BULKHEADS (BROADSIDE). MAGAZINES: 2 ROYAL TOWERS (32-43).

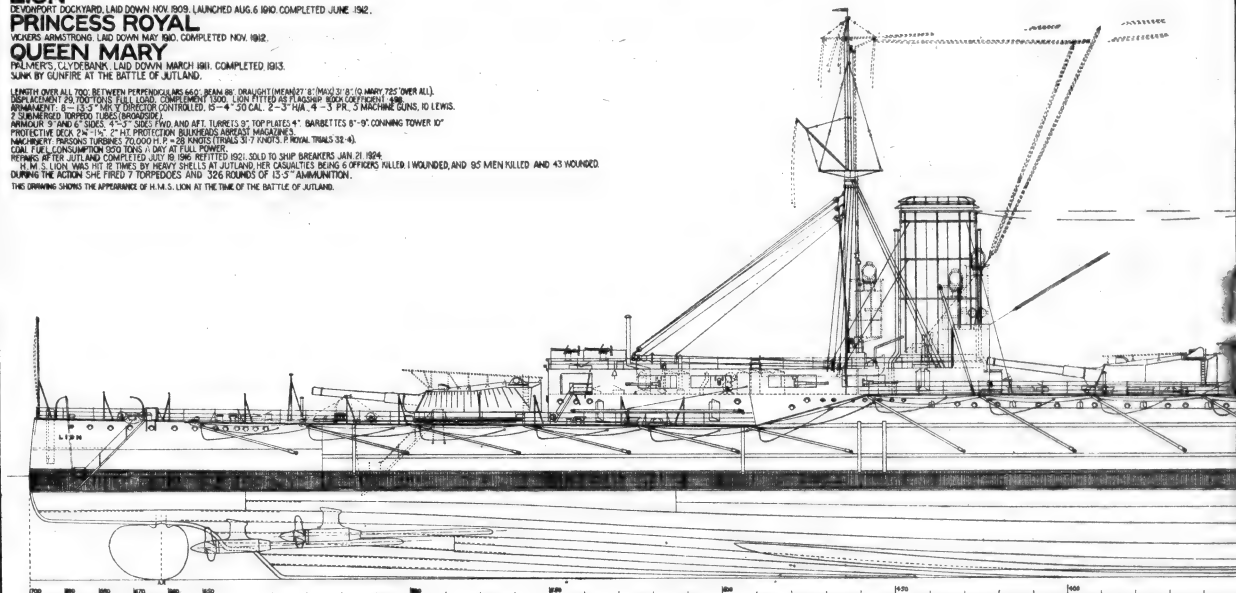
MACHINERY PRISING TURBINES 70,000 H.P.—28 KNOTS (TRIALS) 31.7 KNOTS. 2 ROYAL TOWERS (32-43).

COAL CONSUMPTION 500 TONS (1 DAY AT FULL POWER).

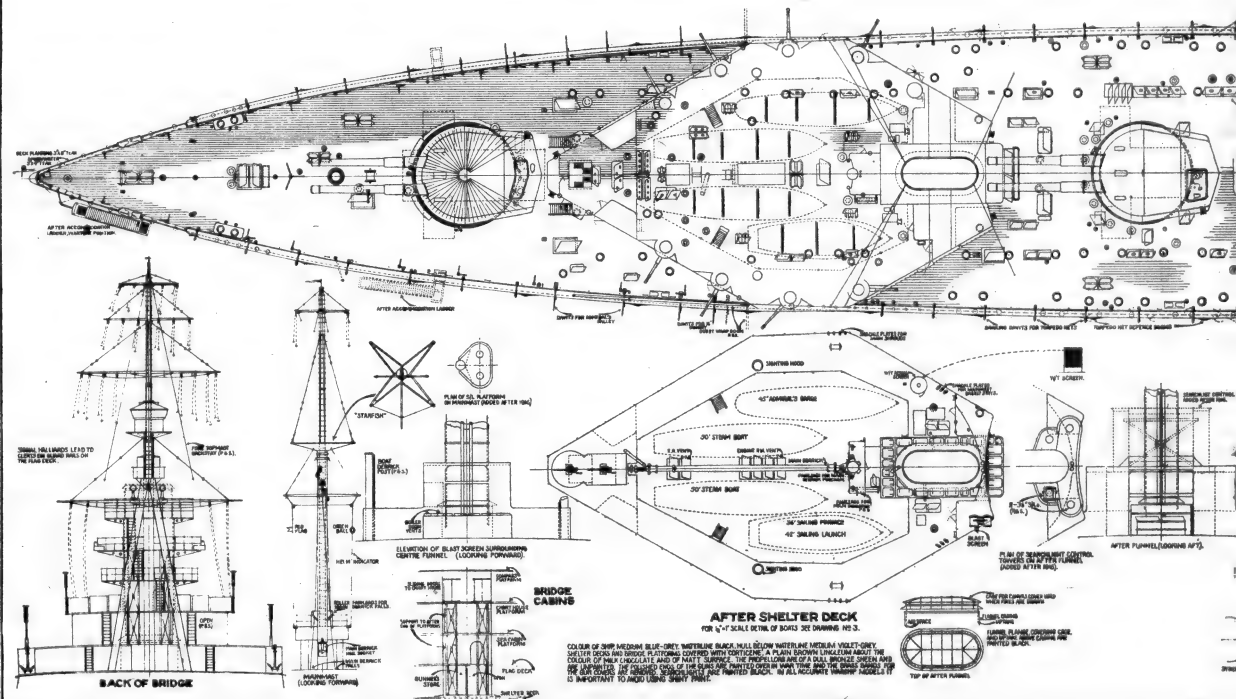
REPAIRS AFTER JUTLAND COMPLETED JULY 19 1916. RETIRED 1921. SOLD TO SHIP BREAKERS JAN 21 1924.

H. M. S. LION WAS HIT 18 TIMES BY HEAVY SHELLS AT JUTLAND. HER CASUALTIES BEING 6 OFFICERS KILLED 1 WOUNDED, AND 95 MEN KILLED AND 43 WOUNDED DURING THE ACTION SHE FIRED 7 TORPEDOES AND 326 ROUNDS OF 15.3" AMMUNITION.

THIS DRAWING SHOWS THE APPEARANCE OF H. M. S. LION AT THE TIME OF THE BATTLE OF JUTLAND.



SCALE 1 IN. = 16 FT.







# 'Water-Fairy'

Conclusion of H. B. TUCKER'S  
article on a modern 10-rater  
design, with reproduction of  
hull lines

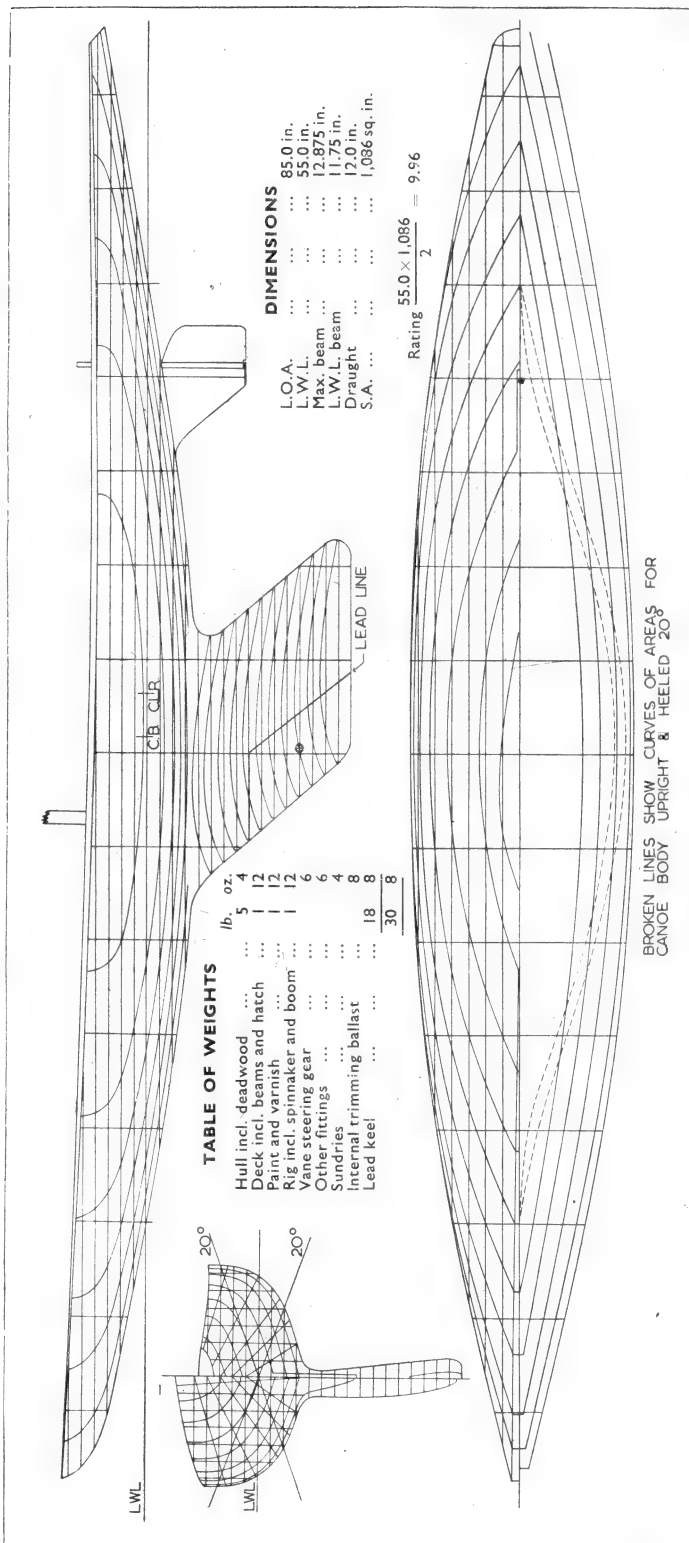
**B**Y WAY OF a tailpiece to this article let me say a little more about the design of *Water-Fairy*. In the first place her hull is perfectly balanced, and at 20 degrees heel there is no appreciable movement of the C.B.

As I previously stated she should greatly increase her waterline as she sails, and the ends will make her very powerful without impairing her performance in light winds. She should not be pressed to the same angle as a deep V-section boat, however. Her sail plan is moderately high. I have shown her with a radial boom though if the skipper prefers it he can use the ordinary type of model yacht jib-club. She is intended to have a metal mast and a flat boom. The mainsail should be loose footed. For the second suit I have reduced merely the height of the plan while keeping the full width. A second hanger should be provided on the foreside of the mast to accommodate the stay for the second jib. Full details are given on the actual plans.

## Fore-and-aft balance

I have placed the C.G. of the lead keel well forward of the C.B. and provided for a little inside trimming ballast in addition. Nevertheless, the builder must check the fore-and-aft balance of his boat carefully and adjust if required. The matter of fore-and-aft balance is all important if the yacht is to float on her designed L.W.L. It is also a point to stress with inexperienced builders that the total designed weight must not be exceeded, and that it is better to be a shade light than too heavy. If necessary a small quantity of inside ballast can be added without difficulty, but if the boat is over-weight her L.W.L. will lengthen and sail area be lost accordingly.

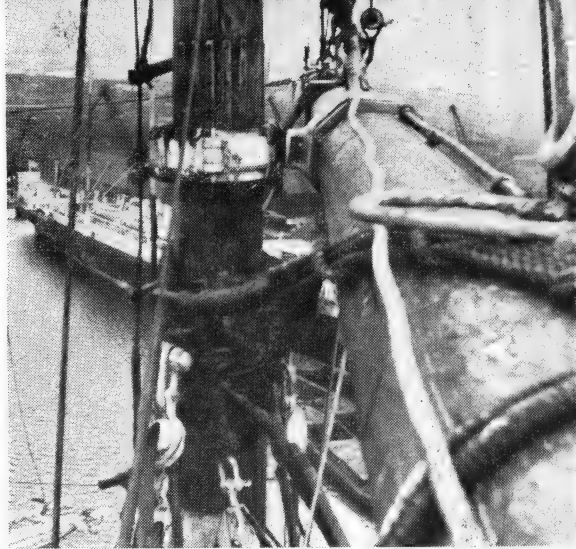
Because of her great length a really efficient backstay can be used, and there should be no need for runners. If, however, difficulty arises in keeping the jib-stay taut they will have to be added. Her balloon spinnaker is large and a topping lift on the spinnaker boom should be employed. I also recommend the use of a Liverpool Boy to ensure she does not hang in stays. This is mainly because of her great length. Owing to the easy, long lines she should be a very simple boat to plank, but she will present no difficulty by any ordinary method of building.



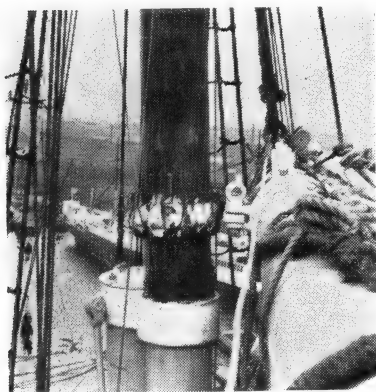
# Ship modellers' scrapbook

... more about the upper yard fittings for the square rigger

*Fore royal yard*



AS A COMPARISON with the yard fittings shown in our Scrapbook in the February and March issues we illustrate this month fittings of a somewhat more normal type of vessel. The photographs were taken by Mr. Richard Cookson on board the four-mast barque *Abram Rydberg* in the Millwall Dock, London, about 1949, when she was a Swedish training ship.



*Fore top-gallant yard*

She had steel lower masts which were in one piece with the topmasts. The top-gallant and royal masts were of wood and were as usual combined in one pole. The lower yard fittings were similar to those shown in the February Scrapbook. Incidentally, in that article we misnamed the chain *sling*, which supports the weight of the yard, as the chain *tye*. The tye is, of course, the chain used for hoisting the upper yards and which is run

through the sheave in the mast to carry the halyard block. On page 68 of that issue chain *halyard* should read chain *tye*.

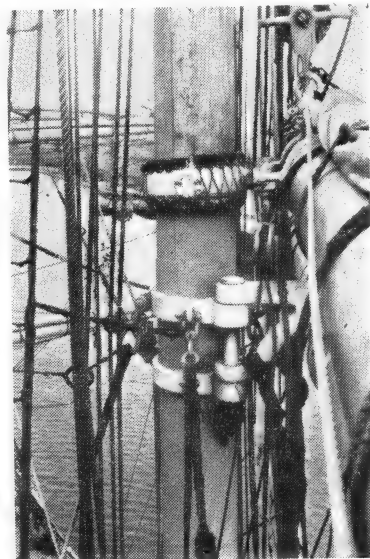
The lower picture shows the fittings for the topsail yards. The truss for the lower yard and the mast bands by which it is supported are similar to those already described for the *Lawhill* and are clearly shown. It will be seen that the yards are swung hard over on to the port shrouds. The upper topsail yard is anchored to the mast by means of a parrel, which consists of a steel hoop in two halves bolted together. The forward half has, formed on it, a pin which swivels in a boss in the parrel span, which, in turn, is bolted to the two parrel bands on the yard. These bands also have bosses or eyes on their upper surfaces. These carry the span to which the pin block for the halyard tye is shackled. In this ship the tye is of wire rope and not of chain as was the case in most ships. The parrel is lined with strips of leather which are secured by lacing on the outer side. These are greased to reduce friction on the mast.

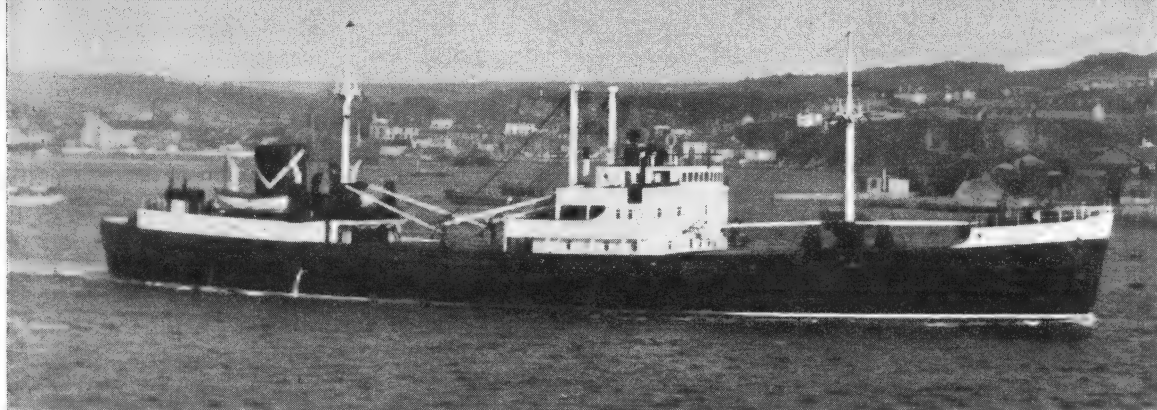
The centre picture shows the parrel for the top-gallant yard with its fittings. The *Abram Rydberg* had single top-gallant sails; thus there was no truss or yard at the topmast cap. The design of the parrel is similar to that of the topsail yard parrel already described, the only difference being that the tye is spliced into a ring on the span and there is no gin block. It will be seen that the wooden top-gallant mast has strips of wood (they may possibly be metal) fixed to the mast where the parrel rests when lowered. These are to protect the mast from wear as the parrel chafes on it when the yard is lowered.

The upper picture shows the parrel for the fore royal yard. This yard is

of wood and has only a single band at the middle of its length. Its central portion is octagonal. The parrel is similar to the others, but is, of course, smaller and, as with the top-gallant yard, protecting strips are fitted to the mast. The yard is fitted direct to the swivel pin on the forward half of the parrel. The Jacob's ladder leading up the mast from the top of the top-gallant shrouds will be seen aft of the mast. The footropes on the yard cross each other aft of the mast and are clearly shown. A becket with its ends spliced to the jackstay will be noticed on top of the yard. Under difficult and stormy conditions the sailor can put one arm through this for security and to enable him to use both hands for the ship. ⚓

*Lower and upper topsail yards*





*The vessel leaving the Cattwater, Plymouth*

## 'CALEDONIAN COAST'

**R. P. H. GURLING** provides us with this interesting pictorial feature following his recent visit to the coaster at Victoria Wharves, Plymouth

I WAS ALLOWED on board by Captain Webber, her commander, and spent over two hours making notes and sketches. He informed me they had had a pleasant trip from Ireland, after a rough time the previous trip when, leaving Dublin, they ran into very heavy weather. He told me she was a fine sea boat and very easy to manoeuvre with her twin screws and power; which was of great importance as she had to enter and leave ports so frequently. Her service speed is 14 knots though she has power to improve on this if required.

Captain Webber is senior captain with Coast Lines. He first went to sea in the three masted barque *Killoran*—built 1900 at Troon by the Ailsa Shipbuilding Company, 261 ft. long 1,817 tons—and, in his strong Irish brogue, expressed in no uncertain terms his feelings on the hard life in sail. He then served in the Allen Line on board the transatlantic liner *Virginian* (now being broken up in Italy—she was formerly the Swedish *Drattmigholm* and Home Line's *Homeland*) and after three years in the Bibby Line joined Coast Lines in command in 1921. He had served in many of their ships and had seen service in the *Atlantic Coast*—a pre-war coastal liner of similar design to the *Caledonian Coast*—running aeroplane fuel to St. Nazaire among many other wartime experiences.

### Accommodation for eleven

The *Caledonian Coast* has comfortable accommodation for 11 passengers, mostly in two berth cabins. There is a large and well-fitted saloon on the main deck and a smoking saloon and lounge on the bridge deck. All the passenger accommodation is amidships in the bridge structure.

She was built by Hall Russell, of Aberdeen, in

1948 for the Aberdeen Steam Navigation Co. Ltd., but was soon transferred to Coast Lines as being more suitable for their coastal service, linking Belfast, Liverpool, Dublin, Plymouth, Southampton and London.

The following are her main particulars:

1. Length o.a., 277 ft.
2. Length b.p., 265 ft.
3. Extreme breadth, 40 ft. 2½ in.
4. Moulded breadth, 40 ft.
5. Moulded depth, 15 ft. 6 in. to upper deck.
6. Deadweight, 1,542 tons.
7. Gross registered tonnage, 1,265.30 tons.
8. Builders, Hall Russell of Aberdeen.

Brief list of colours for those interested in modelling this ship. These were taken during 1951; and may now, of course, have been altered in certain minor cases.

### Fo'c'sle head:

1. Plating, red lead.
2. Plating round windlass and to bow stoppers, black.
3. Windlass black, drum ends, white.
4. Bollards, wire reels, etc., black.

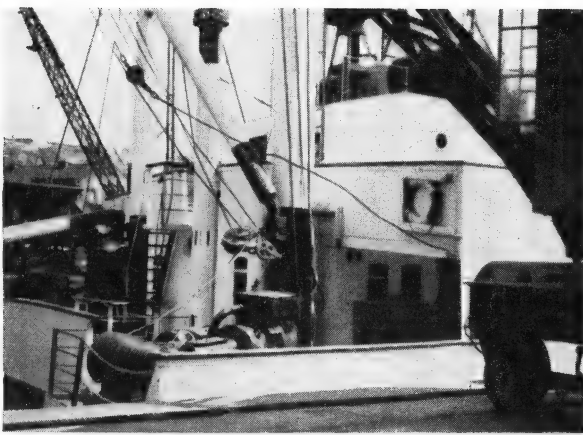
### Fore deck and main deck, and deck at stern:

1. Decking, dark brown tone (steel decks).
2. Hatch covers and combines, black.
3. Winches, bollards, black.
4. Ventilators, white (1 ft. 6 in. black skirting) inside, red.
5. Inside bullwarks, white.
6. Masts, derricks, sampson posts, white with black ends to derricks and base of masts.
7. Scuffers all round approximately 1 ft. 6 in. wide, red lead.
8. Deck at stern, red lead from stern to within 3 ft. of aft house then wood.

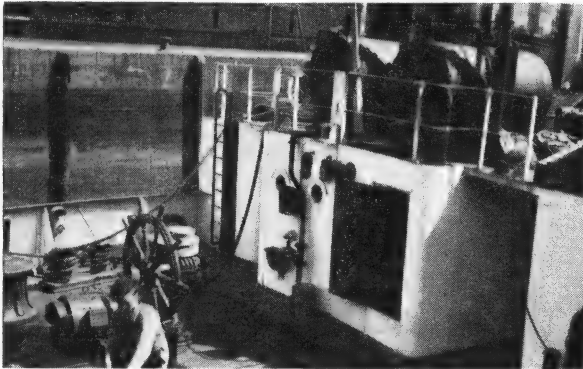
### Bridge:

1. White teak rail round monkey house.
2. Water tanks, boxes, radar scanner, black.
3. Small vents and direction finder, white.

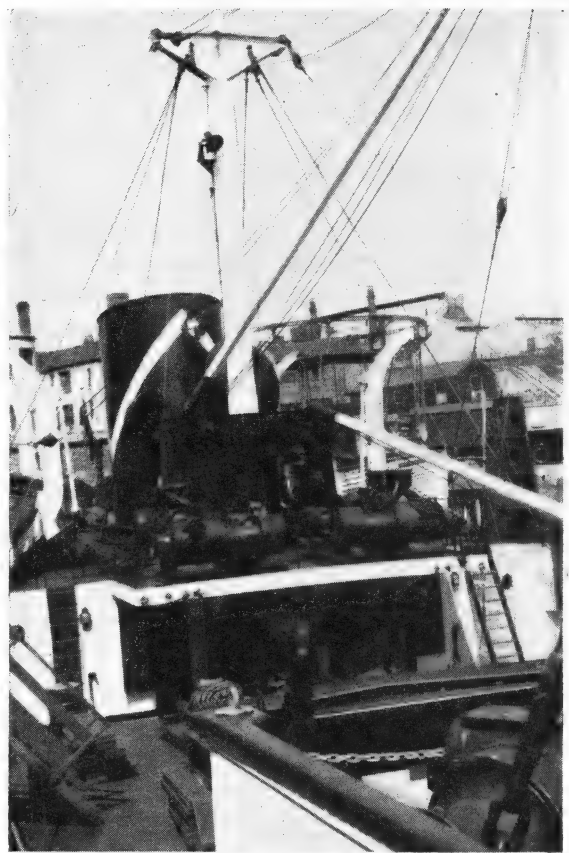




*Rear view of bridge structure*



*Rear of after deckhouse*

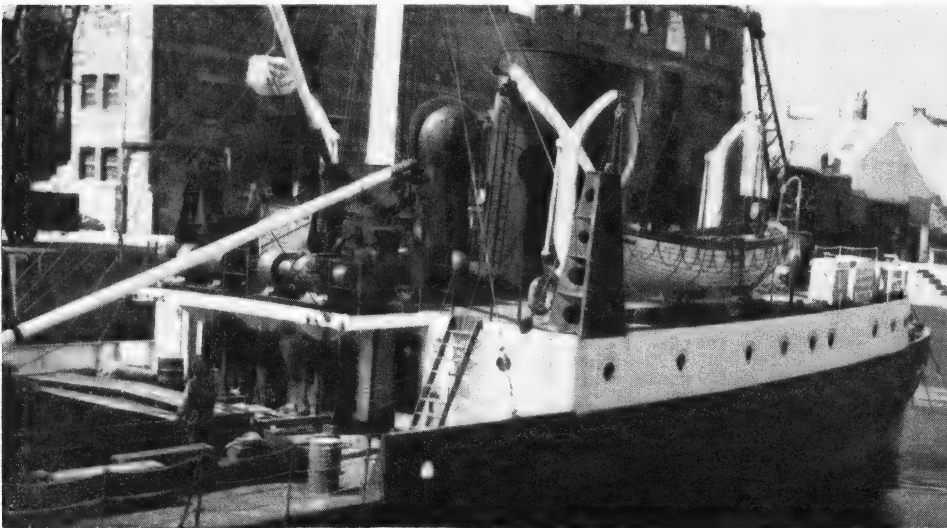


*Main deck looking aft*

*After deckhouse:*

1. Vents and winches, black (inside vents, red).
2. Deck, teak.
3. Boats, white with yellow line round top (tarpaulins grey).
4. Small boxes aft, white.

5. Tanks, black.
6. Rails to forward end, black; rails aft, white.
7. Funnel, black with white V band.
8. Hull, black, white line, dark red boat topping.
9. Life buoys, half red, half white.



*View on port quarter showing derrick winches and davits*

# The built-up ship model

BY T. L. WALL

The first of a short series of articles in which Major Wall discusses various aspects of this fascinating subject. The author's magnificent model of H.M.S. *Portland* created a sensation in the M.E. Exhibition of 1935

IN ORDER TO build a really satisfying ship model it is advisable to have some knowledge of shipwrightry, and that is not an easy craft to learn—especially now that the building of wooden ships is confined to a few small yards specialising in yachts, ships' lifeboats and the like.

Should anyone baulk at that statement one need only consider the planking on a ship's side as it should be done—not too difficult when one knows how, almost impossible if one doesn't. Most of the books on the subject known to me seem to take it for granted that the reader knows all about anything so elementary. Yards catering for yachtsmen are interesting places and not quite like anywhere else. A man will drive his car into a garage, give orders as to what he wants done and leave it at that. But in a yacht yard the atmosphere is entirely different; owners work on their boats—and shout for help when they need it. In that way, working alongside a shipwright one probably knows by his Christian name, one learns. Unless a builder of ship models knows at least the elements of the craft he is apt to fall into a trap and be satisfied with something which to a shipwright is all wrong.

To revert to planking, a shipwright could tell at a glance whether it had been done by a wright or by an amateur. The same applies to deck planking: there are rules which lay down where the joints come and those rules must be strictly adhered to.

Not long before the war an American, Charles Davis, wrote a book—"The Built-up Ship Model"—which, to my mind, is the text book on the craft of building 17th and 18th century ship models. (In the 19th century composite ship building came in, but that is a different story.) Before the 17th century little is known about the ships from a model maker's point of view. Curiously enough it would be possible to build an accurate model of a Viking long-ship because

one or two of these have been preserved in peat or clay. But between the 11th and 17th centuries we do not know much about the ships. There are pictures and drawings, but how much reliance can be placed on them seems to me to be questionable. The ships of that time were small and must have been as lively as corks. For my part I refuse to believe that it was practical to work a ship standing on a deck which sloped at an angle like a house roof, and I can not believe they did.

## Revolution brig model

"The Built-up Ship Model" describes the building of a model of a 16-gun brig at the time of the American Revolution and the reader is taken along step by step as the model was built. The brig described is perhaps the simplest form of ship with fiddle head and plain transom stern, but the principles remain the same whether it is a model of a frigate or a three decker. Davis built his model the way a shipwright would build a model. The men who built the "dockyard" models were almost certainly shipwrights, but they did not construct their frames in quite the same way; they appeared to have worked to a convention of their own. There must have been a reason for that as they knew, none better, how ships were built. Davis is a master shipwright who has built ocean going wooden ships for a living so he knows the whole mystery of his craft, and what he writes can be accepted without argument; moreover he describes each step in words that anyone can understand.

Dockyard models vary a little but as a rule the frames are in one piece and not laminated as in the ships; also they are hard up against each other whereas in the ships there was a space between. When I built my model of *Portland*, 1766 (MODEL ENGINEER Exhibition 1935), there were plenty of the original drafts to work from and one learnt a lot.

In the timbering draft the space between frames is laid down as  $2\frac{1}{2}$  in.

maintained by oak blocks between frames— $\frac{1}{16}$  in. bare in 1/48 scale. Two points arise: there seems to be no point in building up the frames in several pieces as in the ship and as Davis did in his model; it only means unnecessary work since (in a model) they can be cut out of one piece of wood, which is not possible in a ship. If one is building a model to show how a ship was built well and good, but the dockyard shipwrights were not building for that purpose.

Again if the space is left between the frames a risk is run of the wood moving and the model warping out of shape, the more so as the frames are not held in place by the skin planking but—in dockyard models—left open below the main wales. The reason for that was probably to let light in so that the space and general arrangement between decks could be considered. On the subject of frames, where the model is fully planked, the temptation to confine the number of frames to the stations shown on the draft should be resisted. If the frames are too far apart, say more than 1 in., the thin planking will "cut the corners" and show the position of the frames. The reason for the dockyard models does not seem to be generally understood. It is: they were *not* models of ships but models *for* ships—hence the unusual method of construction.

To the uninitiated drafts are not easy to read, and it is difficult to visualise from them what the ship will be like; the Board of Officers, which considered each new ship or class in those days, comprised fighting seamen, and their interest lay in how the ship would handle and the room to fight the guns. It was much easier to do this from a model than from drafts, hence the dockyard models, and the reason why certain planking was left off. In those days men knew how ships were built, so there was no point in showing how the frames were put together. In the model of *Portland* there is the same number of frames as in the ship but,

being hard up against each other, they are  $2\frac{1}{2}$  in., or  $\frac{1}{16}$  in. in the model—wider than the ship's frames—in other words the measurement was room plus space. To decide whether this applied to all dockyard models it would be necessary to examine the timbering drafts of the ship, but it seems common sense.

It is curious that so much detail should be shown. Possibly the builder was in love with his job, and in those days sailors did think a lot of the appearance of their ships.

With "The Built-up Ship Model" as a foundation it should be possible to build a model of any 17th or 18th century ship, given the drafts. During that time ships only differed in fashion, detail, and, to some extent, scantling; a matter of research rather than construction. As regards fashion and

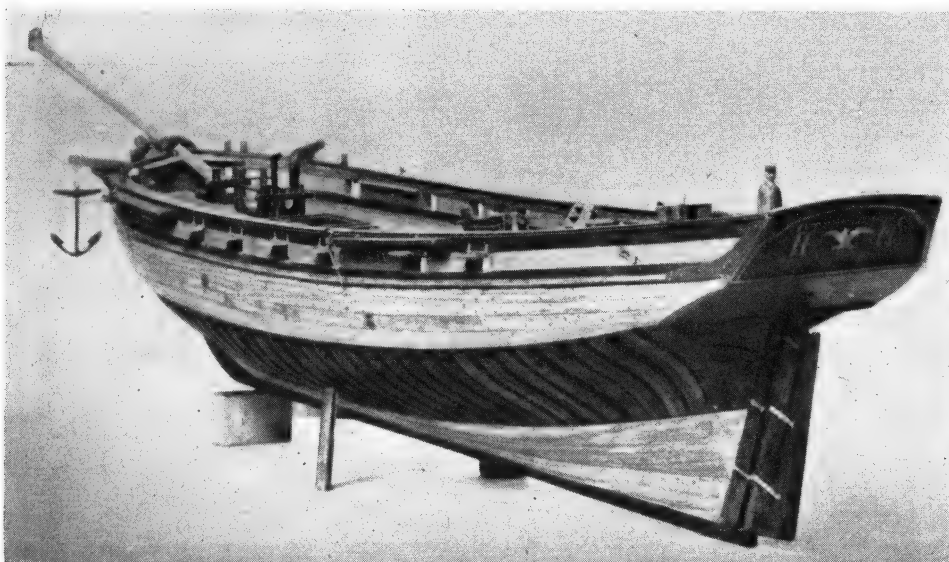
run of those; now I believe they are in the National Maritime Museum. There was a sheer draft of *Portland* which showed no details of her decoration, but there was a sheer draft of *Bristol*, a sister ship, which not only showed all the decoration in full detail but also deck fittings—even the galley stove! Other drafts marked as for the *Portland* class showed deck plans—in fact everything a builder could wish for. If I had asked for a draft of *Portland* all I would have got would have been the bare sheer draft: all right as far as it went, but it left an awful lot to be desired from a model maker's point of view.

The decoration of *Bristol* was not much use for *Portland*, but there is a painting of her in South Kensington which shows her in all her glory.

it is to draw. The most it is possible to do is to improve the technique of someone who already has the gift. If one can draw (and I do not mean paint) then I am sure one can carve, and probably carve as well as one can draw. Take a lion figurehead as an instance. Choose a block of wood which is right for size and square it up. On one side draw the lion in profile, and cut the front and back of the block to the outline on the side—that gives the lion in silhouette sideface. Now draw the lion full face on the front of the block and cut the sides up to the pencil lines; after that one will see the lion and it is merely a matter of cutting off the corners, etc.

The only tool necessary is the best (quality steel) penknife one can buy.

The edge *must* be razor sharp and kept so (it is a waste of time trying



A fine example of the built-up model described in Charles Davis' book

detail "Old Ships' Figureheads and Sterns" by Carr-Laughton must be consulted, for scantlings "The Ship-builders' Assistant" 1711, and "Ship-building Unveiled" 1740 by William Sutherland are of considerable help. The latter two books are not easy to read; most sizes are given as proportions of some other part and it is fatally easy to make mistakes.

### Importance of drafts

If one has an urge to build a model of a ship of a certain period it is well to find out first what drafts are available. Often if one asks for the draft of a certain ship there is none, but there may be drafts of sister ships. As an instance, when I was getting ready to build *Portland* the drafts were in Admiralty records, and I was in the happy position of having the

It is perhaps interesting that the *Bristol* draft shows a painted frieze, and the painting in South Kensington shows *Portland* with a painted frieze; these ships were 4th rates and the experts say definitely that no 4th rates had painted friezes; the drafts are the official Admiralty drafts drawn for the builders . . . what is a poor, ignorant, model maker to do?

I consider that it takes one year a deck to build a proper model; that is a frigate one year, a three-decker three years; maybe a bit more or less according to how much work one puts in and the amount of decoration, but not all that difference.

### On carving

Davis does not touch on carving, but then I do not think it is possible to teach anyone to carve any more than

to work unless it is). Keep touching up the edge all the time on a fine stone—cut-throat razor hone for choice.

Use a two- or, at most, three-bladed knife because it is easier with a thin handle. Lay the forefinger along the back of the blade and cut with a drawing cut.

Do not attempt to achieve a too smooth and round a finish like an ivory carving; a wood carving should be a series of planes as cut by the knife. It looks better that way too. Not having tried either lime or holly I cannot express any opinion about them; I believe the carving on most of the dockyard models, if not all, is done in boxwood. My experience of that is that it is sure to burst when taking the final cut—always the final cut—which is most irritating. ⚓



# BLUE FUNNEL LINE'S LATEST

**T**WO RECENT CHANGES in the Blue Funnel Line fleet have been the delivery of the new motor liner *Dolius* and the sale for scrap of the 36 year old m.s. *Deucalion* (ex *Glenogle*). The *Dolius*, a cargo passenger ship of 7,964 tons gross and 9,400 tons d.w., was built by Harland & Wolff Ltd., Belfast. In design she closely follows her owner's post-war pattern, although a small but interesting variation concerns the fitting of a short length of bulwarks on the poop, but which, rather surprisingly, stops short of the ends of that island.

This new vessel has an overall length of 485 ft. and a breadth mld. of 62 ft. A single Harland-B. & W. turbo-charged engine of 8,000 b.h.p. is fitted and this gives a speed of 16 knots. The company's vessels handle cargo at a very large number of ports each voyage, a point which calls for particular care in the designing of hold space and cargo handling gear,

This is the third of the company's motorships to be so named. The first *Dolius*, 5,506 tons gross and notable for her Scott-Still machinery, was built in 1923. Following her loss in 1943 the name lapsed for six years until it was given to the former Glen liner *Glenstrae*, a ship whose career finished at the shipbreakers in 1952.

## New Mediterranean traders

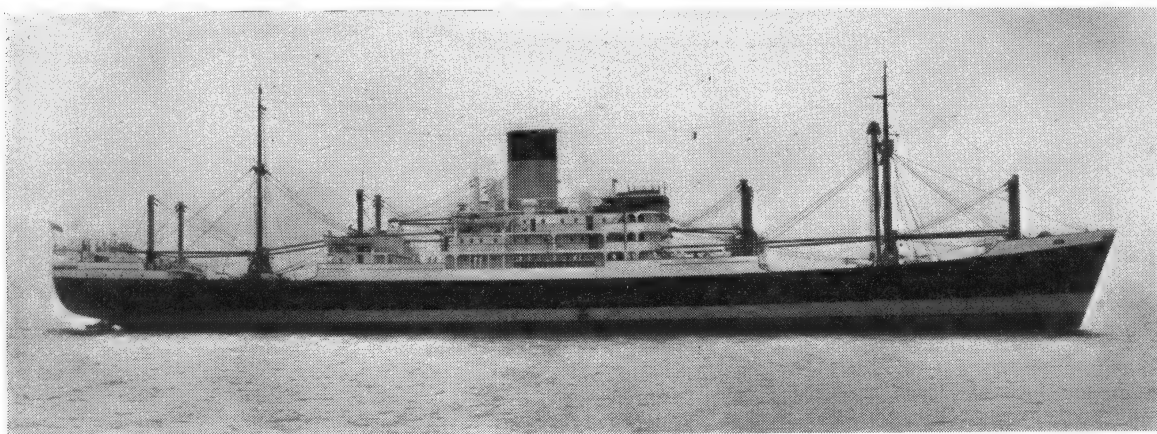
**T**WO INTERESTING ships which have joined the fleet of the Tirfing S.S. Co. during recent months are the *Thuleland*, 3,659 tons gross, and her sister, *Tavastland*. These are the first two to be completed of a trio ordered from the A.G. Weser. They are designed for the North Europe-Levant service of the Swedish Orient Line which, like the Tirfing

are also situated. Cargo handling gear includes 13 derricks operated by electric winches as well as two electric cranes.

To reduce the danger of fire a large proportion of the accommodation bulkheads are of steel, while all wood work is fire-proofed. A 6-cylinder 2-stroke s.a. M.A.N. type diesel of

# SHIPS

## IN THE NEWS



*M.V. DOLIUS, Blue Funnel Line's new cargo passenger ship*

The auxiliary machinery equipment on board the *Dolius* is particularly elaborate—altogether the vessel has some 112 motors, ranging in size from  $\frac{1}{2}$  h.p. to 100 h.p. An interesting feature is the fact that, besides the two 220 volt 450 kW diesel driven generators in the engine room, there is also a 350 kW gas-turbine driven unit, mounted in a special compartment on the boat deck. These are so interconnected that, should either of the diesel generators fail, this emergency set will automatically come into operation.

company, forms part of the Brostrom group.

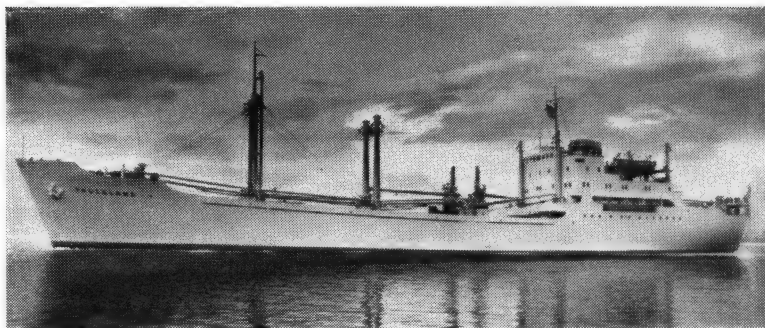
These vessels are strengthened for navigation in ice, and have two continuous decks, a short fo'c'sle and a long poop in which all the accommodation is arranged. They measure 360 ft. in length b.p.  $\times$  53 ft. 9 in. breadth mld., and have a load draught of 21 ft. Their d.w. capacity is 4,590 tons. The five holds are all ventilated for the carriage of fruit cargoes. Four are placed forward of the engine room, the remaining one being right aft where large deep tanks

3,950 i.h.p. gives a speed of 15 knots.

## Liquid gas tankers

**T**WO SHIPS WHOSE appearance will surely long arouse interest are the new liquid gas carriers *Nevides* and *Langenberg*, which have lately been bought by Brazil. Apart from the Shell-owned *Butagaz* also built last year, they are the largest vessels to be specially designed to carry this type of cargo. Several smaller ships have been built for coastal service, but all larger ones have been con-

versions. Unlike *Cap Carbon* (described in the issue of June 1955) and nearly all others these two carry their cargo, not in many vertical cylinders or containers, but in two very much larger ones which extend horizontally forward and aft of the midship bridge structure, much of their bulk being above deck. The cubic capacity of these containers is 2,590 cubic metres, corresponding to 1,000 tons at 0.5 specific gravity. The vessels, which are intended to carry either propane, butane or ammonia, have an overall length of 311 ft., a breadth mld. of 41 ft. 4 in., and a load draught of 14 ft. 8 in. The gross tonnage is 2,239.



Above: M.V. THULELAND, designed for the North Europe-Levant service

Below: The liquid gas carrying M.V. LANGENBERG

Bottom right: M.V. INDIGIRKA, new supply ship for the Russian Eastern fishing fleets

**By Laurence Dunn**



Built by the Ottensener Eisenwerke A.G., Hamburg-Altona, for the local firm of Willy Schlieker & Co., the first of the pair, the *Nevigés*, was delivered on July 16, her sister late in November. The propelling machinery, consisting of two diesel engines of the builders' own design, develops 2,000 b.h.p. and gives a service speed of 13½ knots.

In January of this year it was reported that both the vessels had been sold to a Brazilian State concern, the Petroleo Brasileiro S.A.-Petrobras of Rio de Janeiro, and on January 14 the *Nevigés*—the first to be handed over—left Hamburg for Texas.

#### Russian fishing supply ships

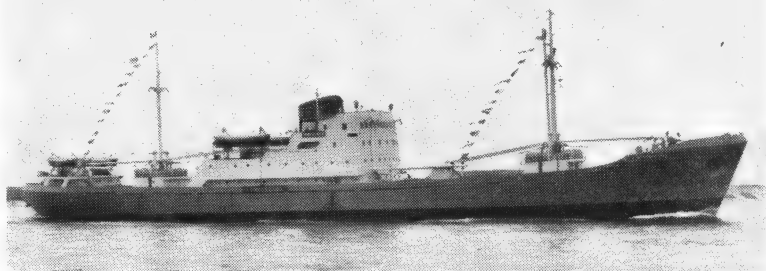
THE "INVASION" OF Norwegian waters by a Russian herring fleet early this year was yet another reminder of the large number of

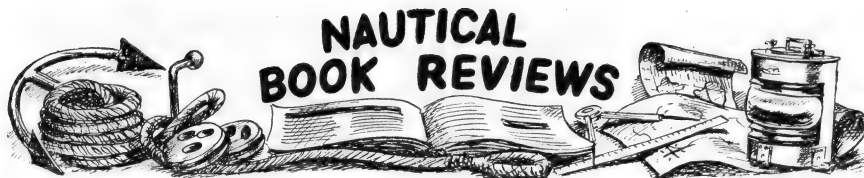
fishing craft owned by the U.S.S.R. On that occasion interest was largely centred around the parent ship *Tambov*, although few details about her were published. This vessel, of somewhat chequered career, was originally the *Dalewood*, a France, Fenwick collier of 4,500 tons d.w. Delivered to them by the now extinct

Eltringham yard in 1921, she proved unsatisfactory in service and was sold out of that fleet a couple of years later. After a long spell under the German flag she was captured as the *Carl Jungst* by British forces at a German Baltic port. This was at the close of the war, and she was brought to England and renamed *Empire Durent*. Later, a Russian claim was upheld and she then became the *Tambov*.

This veteran makes interesting comparison with a series of new Russian vessels, of which two—the *Jana* and *Indigirka*—have so far been delivered, their builders, the Orenstein-Koppel und Lubecker Maschinenbau A.G., having three more on hand. All five are designed to serve as replenishment vessels to the Russian Eastern fishing fleets, supplying fuel, water and stores, and relieving them of their catch.

The two ships so far completed are of 3,782 tons gross and 3,240 tons deadweight. Their overall length is 364 ft. 6 in., breadth mld. 47 ft. 7 in. and load draught 20 ft. 6 in. Each is fitted with a new type of M.A.N. s.a. two-stroke engine, which at 150 r.p.m. has an output of 3,120 b.h.p.—this corresponding to a speed of 13½ knots. There are five insulated holds, each with a hatch measuring 13 ft. long × 10 ft. wide. Serving them are one 25-ton and 10 3-ton derricks. Interesting external features of these handsome vessels are the anchor recesses forward, the fitting of a stern anchor and the pronounced tumble-home of the bulwarks, at bow and stern.





**CHERISH THE SEA: A History Of Sail.** By Jean de la Varende. Translated from the French. Published by Sidgwick & Jackson. Price 30s.

This a most unusual book, unusual in its approach to the subject, and also in its general style. Most writers on such a subject become rather heavy-handed and ponderous, but here we find the exact opposite.

The author, who comes from a long line of distinguished naval officers, is obviously a lover of ships and the sea, and he treats his subject accordingly. He blends the facts relating to the development of the ship with the facts of history in a delightful fashion. We do not always agree with his findings and think that some of his ideas are coloured by his personal and national preferences, but this is probably what makes the book so fascinating to read. His account of the Battle of Trafalgar is somewhat different from the British version to which we are accustomed.

In his book the author goes back to the very beginnings of shipping in ancient Egypt, and passes through the Chaldean and Phoenician periods to Greece and Rome. The ships of the Vikings, the Crusaders, and of the north generally, are followed by those of the Mediterranean—Venice, Genoa and Malta in particular. The struggles of Spain, Holland, France and Britain for naval supremacy, and the resulting development of their ships, are discussed in considerable detail. The book concludes with a section on the clippers and the carriers, with a final chapter on exotic ships, including those of China, Japan and the isles of the Pacific. The illustrations are from the author's own drawings. We are somewhat puzzled by the huge figure in the bows of the Assyrian ship in Fig. 18 and a similarly large figure in the poop of De Ruyter's ship in Fig. 86, but on the whole the drawings are quite descriptive and are in keeping with the character of the book. To quote from the publishers' remark on the dust cover: "The title points the spirit which informs the whole book."

#### VALUABLE PUBLICATION

*Selected Plans of Inland Waterway Vessels.* Published by the Department

of Economic and Social Affairs, United Nations. Sales Number 1955, VIII, 2. Price 3s.

This is a very valuable publication for the student of water transport, and even more so for the ship model maker who wishes to build an unusual type of vessel. Some of the types represented are plainly drab and utilitarian, but others would make attractive miniatures or even working models. The drawings show a considerable amount of constructional detail and all of them are carefully drawn to the uniform scale of 1 : 150 or slightly smaller than 3/32 in. = 1 ft. The types include barges, both dumb and self-propelled, from Britain, the United States and the Continent, and range from the British narrow boat of 50 tons and the French water-bus for 80 passengers to the huge Rhine barges of anything up to 890 tons capacity. A French Sudan river steamer of 390 tons and carrying 61 passengers is also included. The tugs are interesting, from the tiny French river tug of 144 h.p., the sleek quadruple screw French tug of 2,200 h.p., with its two funnels, the handsome triple screw Belgian tug of 2,400 h.p. to the large Mississippi tug of 2,900 h.p. The last plate, which shows a 35 ton compartment boat from North East England, comes as an anti-climax after these big tugs. At its very modest price this is a publication which will be eagerly sought after.

#### COMPACT BOOKLET

*Canadian Pacific—1891-1956.* A short history and fleet list by George Musk, A.M.Inst.T., C.P.R. London, in association with The World Ship Society, 5, Fenchurch Street, London, E.C.3.

This little booklet contains in a compact form a mass of useful information relating to the ships of this very important concern. Following a brief historical sketch of the development of the company there is a complete fleet list with general particulars of each of the ships owned and chartered by the Canadian Pacific Railway including those taken over when the Beaver and Allen Lines were absorbed in the company. Numerous photographs and a number of Captain J. H. Isherwood's wonderful scale drawings are an attractive feature of the book.

#### WORTH-WHILE ISSUE

*Shellbacks.* Published by the Shellbacks, Gravesend. Organiser Mrs. R. Coughlan "Deena," Thong, Shorne, nr. Gravesend. Price 4d.

This is No. 4 of Vol. 1 of this publication and is evidence that both the society and their magazine are getting into their stride. In addition to the news of the society there are some amusing stories and some quite interesting articles, one on the Goodwin Sands, one on the *Arethusa* and one on recent voyages in small boats. Verse seems to be appreciated and included are some rather beautiful lines on the *Cutty Sark*. A few informative queries and replies complete a very worth-while issue.

#### FIRST SUPPLEMENT

*The Sheet Anchor—Supplement No. 1.* Lightweight hull construction.

In response to numerous requests for particular articles, many of which are not now available, it has been decided to reproduce from time to time a supplementary issue containing the articles most in demand. The supplements will, as far as possible, contain articles dealing with one particular subject. Supplement No. 1 is now available and we are impressed with its usefulness. It deals with lightweight hull construction and contains an article on his technique with tinplate by Norman A. Ough. Reproductions are given of Mr. Ough's drawings of the cruiser H.M.S. *Sheffield* and of H.M. Submarine *Olympus*. The remaining article is on laminated paper hulls by J. C. Hool and describes a method which also produces a very light hull. This is a very useful production.

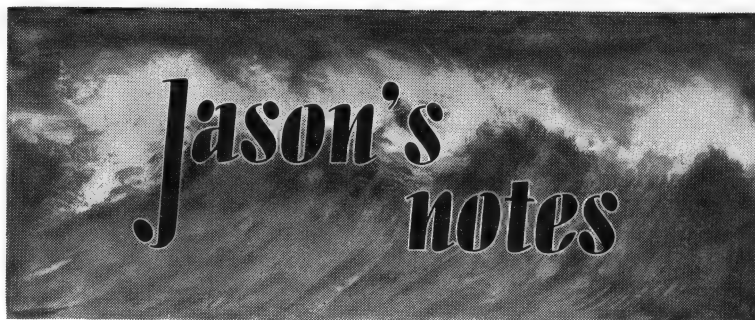
#### GERMAN REFERENCE BOOK

*Schiffsliste, 1956.* Published by Eckardt and Messtorff, Steinhöft 1, Hamburg 11.

This is a list of all German ships of over 100 tons register, combined with a list of German ship owners with tables showing the vessels they own. The ships are classified as steamers, motor-ships, tankers, fishing craft and tugs. As a compact book of reference this will be an asset to all who have an interest in these ships. The fact that it is printed in German does not in any way diminish its value.



The M.E. Exhibition, "hobbying" on holiday, a teaser for Transatlantic modellers . . . these are some of the subjects which our columnist comments upon this month



**T**HERE'S MAY UPON US already. For some societies this is the last meeting before the autumn. So . . . make sure you have enough entry forms for the MODEL ENGINEER Exhibition, that your society understands the difference between the Club Team Prize and the Maltby Trophy and that the entry form contains the name of the society.

All modellers can do a spot of their hobby on holiday by using camera and sketchbook. The wife objects! Ah! But she doesn't, for you carefully place her against that old shrimper in the harbour coaxing her gently: "Now, dear, let's try the light closer to the bow!"

#### Next month's sailing rally

**T**HE EVENT WILL take place on Sunday, June 17, and will follow closely on last year's programme. If your model can sail—well, have a go. Write to Rally Secretary: A. K. Williams, Fair Winds, 94, Park Road, Burgess Hill, Sussex. Entry fee for each model is one shilling and forms should be in before the end of this month.

#### A professional

**I** RECENTLY CALLED ON a lone wolf—Donald McNarry, who, today, is probably our best known miniaturist. A championship cup winner, he has written a book on his art and craft. He has turned professional. That is to say he mainly, or exclusively, depends upon model making for his living. He has fitted out his garret as a workshop. And the secret of his success is organisation. His current model, now nearing completion, is a lovely job of the seventeenth-century H.M.S. *Britannia*. The model is nearly 18 in. long and, of course, is not to his usual scale of 50 ft. to 1 in. but nevertheless it is an exquisitely detailed waterline model under all sail.

Both Donald and his wife are proud of this model, and I very much hope he is successful in his efforts to have

the model on show in this year's MODEL ENGINEER Exhibition.

Many readers are now thinking: "Is it worth while turning professional?" Personally, I would say no. This decision is based on more than a quarter of a century's experience. I know a number of professional model makers—and they all agree with me.

#### Their first show

**A**N AGREEABLE SURPRISE awaited me at the first exhibition of the newly formed South London Ship Model Society. As was to be expected most of the models were in construction stage but some ambitious efforts were on view. I noticed, particularly, a "middle ground" Lowestoft modern trawler (30 in.) and an old sailing trawler, also from Lowestoft, of three-quarters of a century ago. But the makers were not connected. There was also a 2-ft. model of a Stuart Royal yacht. The wreathed ports, even at this large scale, are usually difficult to make. These, however, seemed good so I enquired the methods of construction. The maker uses a stuff called Barbola. In small pieces it sets rather quickly—under the hour—yet quite long enough to shape with tools. A 12-gun brig (1840) from Underhills plans shows excellent promise as did a number of miniatures of liners to scales of 100 ft. and 200 ft. to the inch.

#### Quo Vadis

**I** USE THIS FAMOUS Latin tag because of a research worker I met at this exhibition. He is a Channel Islander whose great grandfather commanded a topsail schooner, the *Marie Georgiana*. Naturally, he had heard tales of the captain in his childhood and, later, he made up his mind to make a model of the schooner.

*Marie Georgiana* was built by Lavoine at St. Ignac (and registered at Quebec, Canada) in 1858 for the stock fish trade. Just over 100 tons she was used in the well-known nineteenth century triangular route:

Newfoundland-Portugal-British Isles. My research worker possesses a certified copy of a Lloyd's survey on a sister ship, and a host of other details. Now he is hoping to get body plans and lines of the ship. Maybe some Canadian or American reader can help? I doubt if he'll be successful unless she—or a sister ship—was taken over by the government of the day for exploration or war purposes. Anyhow he has established contact with relatives and descendants of the builders. He has quite a file of correspondence. Meanwhile he would be well advised to get in his 'prentice hand on a schooner of known particulars. Good hunting, Mr. J. F. Picot!

#### Hammersmith on cases

**O**NE OUTSTANDING POINT about show cases seems to be that the case usually follows the natural bent of the maker—i.e. a woodworker makes a wooden frame, the metal worker goes for a metal frame and, provided the model is not too big, the others stick to *passe-partout*. All are agreed upon the necessity for accuracy in cutting the glass.

Glass merchants are not particular to an eighth of an inch—or even a quarter inch in their measurements. There was little or no liking for the use of a glass cement as this tended to produce cracks in the glass. Plasticine was favoured as a "bed" for the glass edge in the base but very few had heard of carborundum stone for nibbing off the sharp edges of the glass after cutting. Many found fault with the use of Perspex for it tends to scratch easily. There is, however, a big advantage in weight.

#### Leicester responds

**A**S A RESULT of my paragraph endeavouring to contact those interested in reviving the ship model society there is good hope that Leicester will be under way again in a month or so. I have heard from a number who were members of the old society.



● Letters of general interest on maritime matters are welcomed. A nom de plume may be used if desired, but the name and address of the sender must accompany the letter. The Editor does not accept responsibility for the views expressed by correspondents.

## LUNCH-HOUR WORK

SIR,—I am sending a photograph of my recently completed miniature 15th century carrack. This is a first attempt at period ship-modelling and took 12 months of lunch-hour work (one half-hour per day). The total length of the model is 7 in., the hull being built up from blocks of parana pine, and leaving the hold space open, looking convincingly deep and dark!

All decks are sheathed with mahogany veneer, the fine, even grain simulating planking, which is athwartships in the waist.

Rigging is silk fishing-line for the mainstay, waxed cotton thread for forestay and shrouds, and nylon filament (for repairing stockings) for the running rigging. The deckhouse on the sterncastle (which was of canvas over a wooden tilt-awning) carried a painting of a saint and is shellacked paper.

The flag is made of thin copper foil, blue with a device in white and the pavises or wooden shields painted in correct heraldic colours.

Deadeyes and blocks presented a problem for a beginner; the best effect for the deadeyes was given by tiny glass beads which actually look better than the photograph would suggest. For blocks I hit on what I consider a good idea; they are thin slices from a section of plastic wire-covering. They are not really like actual rigging blocks but the impression they give is quite realistic, being only 1/20 in. dia.

Timperley,  
Cheshire.

DAVID B. HYDE.

## NAVAL HISTORY

SIR,—Congratulations on the February issue of SHIPS AND SHIP MODELS. I have noticed what I believe to be certain discrepancies in the article on the passing of the battleship by Mr. Wettern and thought I might perhaps venture to comment on these.

The photograph on p. 43, alleged H.M.S. *Dreadnought*, is actually the battle cruiser *Indefatigable* going into action at Jutland and presumably the last photograph taken of this ship.

The reference to the completion date of *Dreadnought* as 1908 is a bit adrift. She was completed for trials in October 1906 and commissioned with full crew at Portsmouth on 11 December 1906, after which she was sent on a long experimental cruise to Gibraltar and the West Indies.

Mr. Wettern refers to the Admiral class ships *Collingwood*, *Benbow* and *Rodney* as the first to have screws instead of paddles, turrets instead of guns on the broadside, armour instead of reinforced wood, double bottoms and watertight compartments. From his previous reference to the *Devastation*, I suspect these statements were merely "slips of the pen" but possibly the following remarks on them may be of interest. I shall take his points in order and refer only to *bona fide* seagoing ships.

I do not know the name of the first British warship to have screw propulsion (my own period of research does not go further back than 1860) but screw line-of-battle ships and frigates were definitely in service in the '50s and, I believe, even earlier.

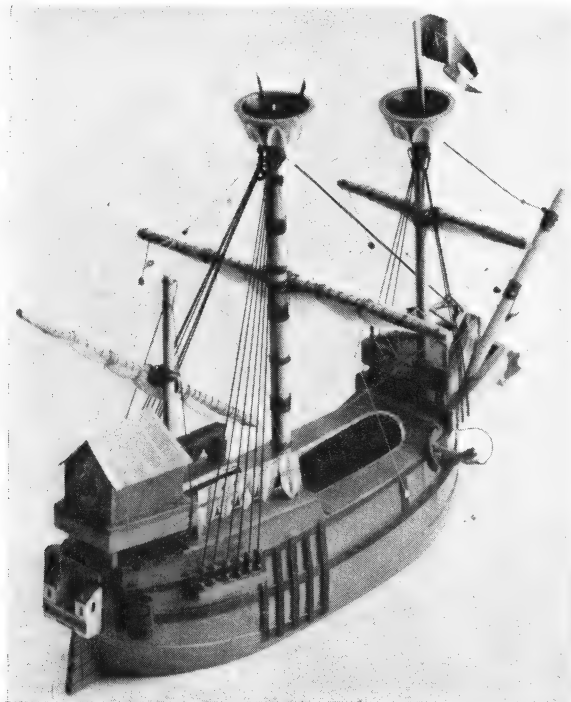
The first turret ship completed for the Royal Navy was the *Monarch* (1869), a contemporary of the ill-fated and less well-designed *Captain*. The first to have the fixed barbette (within which the gun mounting itself revolved) and also the last with any heavy guns mounted on the broadside below the upper deck was *Temeraire*, completed 1877.

The first iron-hulled armoured ships in the Royal Navy were *Warrior* and *Black Prince*, completed 1861/62.

These two were also the first to have double bottoms and watertight compartments (the latter was impracticable in the earlier wooden hulls) although the double bottom was only partial and fitted only below the engine and boiler rooms. The first steel-hulled British battleships were *Colossus* and *Edinburgh*, completed 1886.

The Admiral class did not actually embody any of the "firsts" with which Mr. Wettern has credited them. Their design was, however, noteworthy in that it combined offensive power and speed to a then unusually high degree, with some sacrifice in protection, the armouring being concentrated over the vital parts only.

Hamilton, DERISLEY TRIMMINGHAM.  
Bermuda.



A reader's recently completed miniature 15th century carrack. It was built in 12 months—half an hour each day. See first letter

## SEA SETTINGS

SIR,—Seeing an aerial photograph of the wave formation of the tanker *World Glory* in the February issue of your magazine, I thought that the enclosed photograph might also assist readers who are concerned about realistic sea settings.

The picture is of H.M.S. *Cockade*, a destroyer of the C Group, Gillingham, Kent. S. M. BANKS.

## PASSING OF PADDLES

SIR,—I was interested to read the article on the Clyde Fleet in the April edition of SHIPS AND SHIP MODELS. For me, at any rate, the two pages were well worth while if only for the splendid picture of the paddle steamer, *Maid of the Loch*. It is sad that this picturesque and economical type of vessel is passing out of use. I am sure that there must be many like me who feel that it adds variety and colour to the Clyde and I hope that it will be many years before they finally disappear. I know that they have been replaced in many other parts of the country and I am told that they are in much the same category as horsedrawn vehicles in London and steam locomotives. Long may they survive in Scotland.

Glasgow. S. W. BROWN.

● Readers who have similar sentiments to those expressed by S. W. Brown will be heartened by the recent Admiralty announcement that paddle-driven tugs are being provided for the Royal Navy.—ED.

## MISSING REVIEW

SIR,—Having just received the April issue, may I hasten to congratulate you that publication has been so little delayed in spite of the recent difficulties in the printing industry.

In one respect, however, I was most disappointed. For the second successive month the feature Fleet Reviews is omitted, and I sincerely hope that this lapse is solely due to pressure of space. The authoritative and accurate analyses from your contributor, Mr. Laurence Dunn, have always given me considerable pleasure and interest.

I imagine—and hope—I am not alone among your readers in lacking all the ability and endless patience to create ship models, but who still pursue a fanatic interest and enthusiasm for ships through the medium of the photograph and fleet lists. Mr. Dunn's Reviews, especially those of the lesser known companies, about whose ships published information is so often sparse, are eagerly looked for. London, S.W.4. JEFFERY CURTIS.

● The feature has been "rested." Other views on this would be welcomed.—ED.



Wave formation of H.M.S. COCKADE—see letter "Sea settings"

## TUNNYMAN UNDER SAIL

SIR,—With reference to the article on fishermen of Brittany by Mr. Alan Villiers, I was in Concarneau in September 1955 and took the photograph of *L'Etoile de France* which was, according to her master, the only tunnyman operating under full sail without a motor from Concarneau, although I suspect from her registered number that her home port was Etel. As her master's French was as bad as mine and I had no Welsh, I was unable to find out much about the vessel but she was in very good repair and all her gear sound. There is no deckhouse, a

*L'ETOILE DE FRANCE*, a tunnyman under full sail. See letter "Tunnyman under sail"



source of danger mentioned by Mr. Villiers. The local sailmaker was working on the quayside at the other side of the basin making a new foresail for *L'Etoile* and he confirmed that she was almost the only vessel in the district for whom he made anything but steadying canvas. This sail was being very beautifully stitched by hand and according to the sailmaker of the very best materials. The sailmaker mentioned that until recently at any rate some of the Breton fishermen purchased nets and cordage of Bridport manufacture while sailing in the English Channel as being superior to their own products.

At this time there was a diesel tunnyman being built on similar lines to the *L'Etoile* in Concarneau of oak planking on oak frames, and at Kerdruc on the estuary near Port Manec a few miles south of Concarneau I saw the keel laid of another tunnyman of this traditional line, again being built entirely of oak. The shipwrights working on the keel were truing it up with the adze and they showed me with some pride adzes made in Sheffield which had likewise been obtained by Breton fishermen when in English Channel ports. At these two places at any rate the vessels were being built to the old design and with very fine craftsmanship. Liverpool. DENNIS CHAPMAN.

### Our Cover Picture

This month we show the Antarctic Expedition ship *Theron* arriving in the Pool of London after her voyage to the Weddel Sea. The state of her paintwork gives some idea of the conditions she encountered in her passage through the ice.



# News from the clubs

## MODEL YACHTING ASSOCIATION

The 1956 British Open Championship for "M" class yachts will be held at Dovercourt at Whitsuntide, from Saturday, May 19 to Monday, May 21. This is a very popular class and a big entry is anticipated. Full particulars may be obtained from the Hon. Secretary: R. H. CHAPMAN, 59, Lime Avenue, Dovercourt, Essex.

## M.Y.A. NORTH EASTERN DISTRICT COMMITTEE

The first race under the aegis of this newly-formed committee was held at Scarborough on the weekend of April 7 and 8. Ten boats completed, coming from Newcastle and Scarborough. The results were as follows:

Name	Skipper	Club	Points
<i>Volante</i>	H. E. Andrews	Newcastle	45
<i>Vega</i>	G. Johnson	"	31
<i>Iris</i>	G. Bolder	Scar-	

*borough* 30  
*Adagio* R. Patterson Newcastle 25  
Hon. Secretary: H. E. ANDREWS, 24, Roeburn Way, Kenton, Newcastle upon Tyne 3.

## Y.M. 6m. O.A. AND SOUTH LONDON M.Y.C.

The fixtures for May are as follows:  
Sunday, May 13. Class "A" Team Race v. Eastbourne M.Y.C.  
Sunday, May 27. Class "A" M. & S. championship.

In each case racing starts at 10.30 a.m.

Hon. Secretary (Y.M. 6m. O.A.): H. D. HADFIELD, 132, Westbourne Grove, Westcliff-on-Sea, Essex.

## FLEETWOOD M.Y. & P.B. CLUB

The fixtures for May are as follows:  
Sunday, May 6. Spoon Race, "A" class.

May 20 and 21. Northern District Championship, "A" class.

Sunday, May 27. Livesey Cup, "M" class.

In each case racing starts at 1.30 p.m.  
Hon. Secretary: P. L. WINDSOR, 31, Galloway Road, Fleetwood.

## THE THAMES GROUP MARINE MODELLING SOCIETY

At a recent meeting Vice-Admiral A. D. Read, C.B., was elected the first president of this society. The meetings for May are on Saturdays 5 and 19, at the Terrace Hotel, The Terrace, Gravesend, commencing at 7.45 p.m. New members welcomed. Hon. Secretary: ARTHUR O. POLLARD (Jnr.), The Mission House, Bawley Bay, Royal Pier Road, Gravesend, Kent.

## HOVE AND BRIGHTON M.Y.C.

The fixtures for May are as follows:  
Sunday, May 6. Model Engineers: Sunday, May 13. Vickers-Armstrongs M.Y.C., 36-in.

Sunday, May 20. Third Club Championship, a.m. 10 R., p.m. 36-in. Sunday, May 27. Portsmouth and Ryde M.Y.C., "M" class.

Hon. Secretary: F. Jennings, Ardingley College, Haywards Heath, Sussex.

## POOLE M.Y. AND P.B. CLUB

The fixtures for May are as follows:  
Sunday, May 6. Robert Cup.  
Sunday, May 13. Coronet Points.  
Sunday, May 20 (Whit.). Gist Cup.  
Monday, May 21 (Whit.). Team Race.  
Sunday, May 27. Coronet Point.  
All "M" class.

The radio regatta will take place on June 25 and 26. Full particulars will be announced later or may be obtained from the Hon. Racing Secretary: L. C. ROGERS, 54, Minstead Road, East Hove, Bournemouth.

## THE WEMBLEY SHIP MODEL SOCIETY

The meetings for May are as follows:

Monday, May 14, Club night.  
Monday, May 28. Conversazione. Members will ask the questions and Norman A. Ough will supply the answers.

Hon. Secretary: C. SESTON, 8, Albert Road, Southall, Middlesex.

## LEES AND OLDHAM MODEL YACHT CLUB

Owing to vandalism and the effects of last summer's drought, special efforts are needed to repair the existing sailing water at Hopkin Mill, Lees, or find alternative site. New and former members are invited to sign articles.

New Secretary: C. MONEY, 10, Warrington Street, Lees, Oldham.

## THE BRISTOL SHIPLOVERS' SOCIETY

The annual general meeting of the above society will be held on Tuesday, May 1, at the headquarters, Bristol Sailors' Home, Queen Square. Hon. Secretary: F. C. WATTS, 7, Fifth Avenue, Northville, Bristol 7.

## NORFOLK NAUTICAL RESEARCH SOCIETY

This month's meeting will take place in the Castle Museum on Tuesday, May 29, at the Royal Norfolk & Suffolk Yacht Club, Lowestoft, at 7.15 p.m. G. J. Levine will give a

lecture "From Sea to Sea" (Lowestoft to the Mediterranean through French canals). Hon. Secretary: JOHN F. C. MILLS.

## THE BIRMINGHAM SHIP MODEL SOCIETY

On Friday, May 18, Capt. Marsden will speak on accepting and delivering American ships. Hon. Secretary: Capt. F. J. MARSDEN, 15, Cartland Road, Birmingham 14.

## SOUTH LONDON SHIP MODEL SOCIETY

The meetings for May are as follows:  
Thursday, May 10. Club night.  
Thursday, May 24. A talk on ships' rigging by A. L. Tucker of the National Maritime Museum.

Hon. Secretary: S. W. REEVE, 23, Windermere Road, Coulsdon, Surrey.

## HAMMERSMITH SHIP MODEL SOCIETY

The meetings for May are as follows:  
Tuesday, May 1. Club night.

Tuesday, May 15. "Miniature Modelling," a talk by Stuart E. Beck. This society will take part in a hobbies exhibition to be held at the Town Hall, Hammersmith, W.6, on May 29 to 31 daily at 2 p.m. to 9 p.m. Admission is free.

Hon. Secretary: H. J. COSTER, 98, Craven Park, Harlesden, N.W.10.

## THE NORTHERN POWER BOAT CLUB, GLASGOW

This club has recently been formed and has obtained part of the Boat House at Springburn Park as a club room. Work is progressing on buoys, markers, and a pole for high speed boats. Anyone interested is invited to contact the Hon. Secretary: W. G. SUTHERLAND, 20, Liberton Street, Glasgow, E.1.

## THE THAMES SHIPLOVERS' AND SHIP MODEL SOCIETY

The annual society rally will be held on Sunday, June 17, at the Round Pond, Kensington Gardens, London, commencing at 11 a.m.

Rally Secretary: JOHN FISHER, 19, The Grove, Greenford, Middlesex.

## THE BRISTOL SHIP MODEL CLUB

On Tuesday, May 8. H. L. Smith will give a talk on servo actuators. This will be of special interest to radio control practitioners.

Hon. Secretary: A. RALLS, 8, Kenmore Crescent, Filton, Bristol. (Phone: Filton 2148.)

## "SHIPS AND SHIP MODELS" SALES AND WANTS

Private: 3d. per word.  
Use of Box No. 1s. extra.

Trade: 6d. per word.  
Minimum 12 words.

The Advertisement Manager reserves the right to refuse or suspend advertisements, without giving any reason. No definite date of insertion can be guaranteed, and although every care is taken to avoid mistakes, we cannot be held liable in any way for printing errors or omissions. Receipt by the publishers of advertisers' "copy" for publication implies acceptance of these conditions by the advertiser.

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SAILS for Model Yachts. All classes. Terylene, Egyptian Cotton. Quotation from ROBERTS, 14, Saxon Road, Hove, Sussex.

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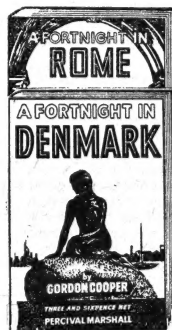
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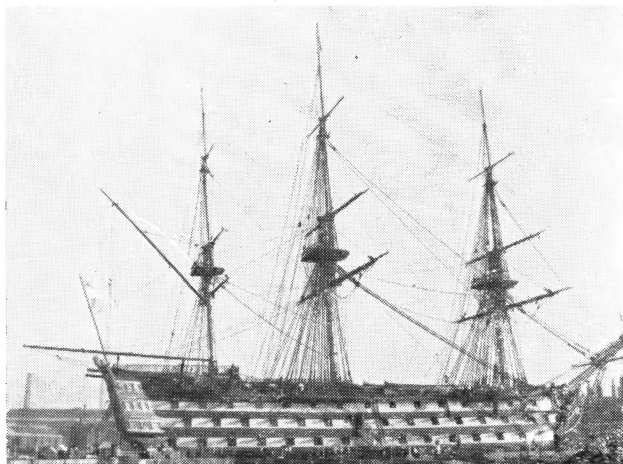
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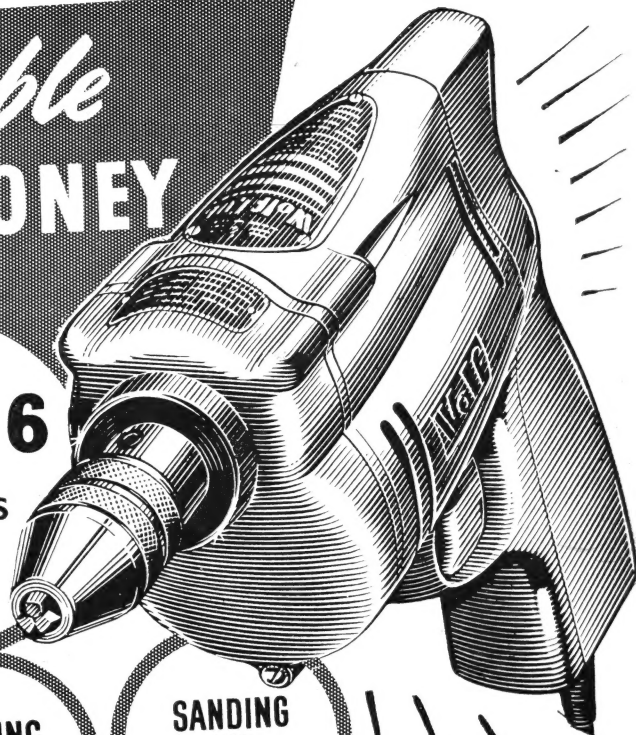
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